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KWAZA IN A COMPARATIVE PERSPECTIVE¹

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In view of the previous sparsity of data, the existing claims with regard to a genealogical classification of the Aikanã, Kanoê, and Kwaza languages of Rondônia, on the Brazilian side of the Guaporé River, are premature and unconvincing. Here, I present new data that contain some striking similarities on lexical, phonological, and grammatical levels. Although these data could point to a distant relationship between the three languages, the evidence is not conclusive and it remains problematical to distinguish possible cognates from areal traits or from chance similarities. Therefore, these three languages must still be considered as unclassified. Swadesh's list of 100 basic words in the three languages is included in an appendix.

[KEYWORDS: Kwaza, Kanoê, Aikanã, Guaporé region, historical linguistics, Sprachbund, Amazonian languages]

1. Introduction. Kwaza is an Amazonian language, formerly also known as Koaiá, spoken by 25 people in the south of the Brazilian federal state of Rondônia. The border between Rondônia and Bolivia is defined by the Guaporé or Iténez River, which flows into the Mamoré, the Madeira, and finally the Amazon River. Both the Bolivian and Brazilian headwaters of the

¹ This article is based primarily on data from descriptive linguistic fieldwork conducted among the speakers of Kwaza during the years 1995–2002. I am especially indebted to my teacher Kyikâu Mãde, who is also known as Mário. I am furthermore very grateful to the inhabitants of the Tubarão-Latundê, Rio Branco, and Rio Guaporé reserves for their hospitality. The Netherlands Organization for Scientific Research (NWO) has generously financed the entire descriptive project of the Kwaza language under grant # 300-72-021. I am also greatly indebted to my teacher Nazaré and the community of Baía das Onças, and I wish to acknowledge the support by the Netherlands Foundation for the Advancement of Tropical Research (WOTRO) of my research on the Arikapu language under grant # W39-273. Comments from audiences at the XVII International Congress of Linguists in Prague and the Workshop Exploring the Linguistic Past: Historical Linguistics in South America, in Leusden, both held in 2003, encouraged me to write this article. Moreover, I want to thank Willem Adelaar, Laércio Bacelar, Mily Crevels, Gale Goodwin Gómez, Sérgio Meira, Pieter Muysken, Eduardo Ribeiro, and Ione Vasconcelos for their comments. Finally, this article has benefited enormously from comments and corrections by Denny Moore, Keren Rice, an anonymous reviewer, and an associate editor of *IJAL*. Of course, none of these people necessarily share the views expressed here and all errors are mine.

This article is dedicated to the memory of Maria Edite Kwaza, without whose concern the Kwaza language would have had even fewer speakers, and her husband, Canderé Aikanã, who was one of the few remaining knowledgeable men of traditional Aikanã culture and language.

Guaporé once formed the habitat of many indigenous peoples speaking a wide variety of languages. In fact, the Guaporé region is one of the most linguistically diverse regions of South America. Numerous language families are represented in this region, including the Arawak, Chapakura, Nambikwara, Pano, Tacana, Tupi, and Jabuti families, and about ten unclassified languages. This suggests that the region is a “residual area” in the sense of Nichols (1992) and functioned as an area of refuge in prehistoric times. Furthermore, in Rondônia alone, there are 16 Tupi languages, belonging to six different subfamilies. The time depth of the Tupi linguistic family could be 4,000 years, and the high concentration of its subfamilies in Rondônia suggests that Tupi originated there (Rodrigues 1964). So this and the presence of several smaller families and unclassified languages indicate that the Guaporé region may also be a very ancient center of linguistic diversification (see also Urban 1992).

Contact with Western civilization has led to great population losses and the consequent loss of traditional cultures. Even though the original linguistic diversity of the Guaporé region seems still to be largely intact, speaker numbers are very low: half of the approximately 50 languages have fewer than 50 speakers and one-third have fewer than 10 speakers. The situation with respect to the documentation of these languages is still rather precarious and intensive fieldwork continues to be an urgent task. Nevertheless, a modest number of descriptions have become available recently (e.g., Angenot-de Lima 2002, Bacelar 2004, Everett and Kern 1997, Gabas 1999, Galucio 2001, Kroeker 2001, Sakel 2004, Telles 2002*a*; 2002*b*, Vasconcelos 2003, and van der Voort 2004) and more are fortunately on their way. Crevels (2002*a*) is an excellent overview of the situation on the Bolivian side; for the Brazilian side, there is only a brief inventory (van der Voort 2003*b*).

Many questions about the genealogical status of the languages of the Guaporé region are still unanswered. In particular, a large number of languages have resisted attempts at classification. In view of the sparsity of data on these languages, the claims that have been made in the past about these being either isolated languages or belonging to certain macro-families must be regarded as premature.

One of these unclassified languages, Kwaza, has been the subject of my own fieldwork since 1995 and I have compiled a considerable corpus of analyzed data. During my fieldwork on Kwaza, I also had access to native speakers of neighboring languages and was able to collect some data (those used in this article are listed at the end of **3** below). Furthermore, recent fieldwork by Carlson (in Hinton 1993) and Vasconcelos (2003) on Aikanã (unclassified), Bacelar (2004) on Kanoê (unclassified), Telles (2002*a*; 2002*b*) on Latundê (Northern Nambikwara), and Galucio (2001) on Mekens (Tupi-Tupari) has provided me with more information on these neighboring languages. In this article, I discuss possible evidence for long-distance genetic

relationships of Kwaza with other languages of the region.² First, however, I introduce the sociohistorical context of the language, present the sources, and discuss its basic structural characteristics.

2. The context of Kwaza. Many of the indigenous peoples who traditionally inhabit the south of Rondônia belong to a specific cultural area: the Marico culture complex. This culture area was characterized by subsistence based on seminomadic swidden agriculture combined with hunting and gathering, relatively small egalitarian societies and territorial subgroups that could form alliances across linguistic borders. According to Maldí (1991), it included a great number of people speaking different languages, such as Kepkiriwat, Makurap, Mekens, Tupari and Wayuru (Tupi-Tupari), Aruá and Salamã (Tupi-Mondé), Arikapu and Djeoromitxi (Jabuti), and Kanoê and Aikanã (unclassified). Although reference is hardly ever made to the Kwaza people in the relevant literature, it is obvious that they belonged to the same cultural complex.

Nowadays, much of the traditional indigenous cultures of Southern Rondônia has disappeared. The region was opened up for Westernization at the beginning of the twentieth century, with the rubber boom. Relocation, forced labor, murder, and the spread of exogenous diseases such as tuberculosis, influenza, measles, and malaria have decimated most of the indigenous peoples. The building and subsequent asphaltting, completed in 1984, of the main highway, the BR-364, has stimulated the immigration of outsiders from the south and the east of the country. In the ensuing period of uncontrolled deforestation, cattle ranching, and mining, the remaining indigenous groups were forced off the best lands and ended up on indigenous reserves. Even there, the Indians continue to suffer physically from illegal invasions, logging, and mining by Westerners, while Western cultural and religious pressures are at work destroying the remaining traditional aspects of indigenous life.

Again, however, the indigenous peoples have found ways to organize themselves and are trying to resist annihilation with varying success. During the past decade, many groups have established indigenous organizations and are engaged in preservation and revitalization of their native cultures and languages.³ To the north, the indigenous cultures have suffered less pressure from Western civilization and have kept their original lands. Also, there are still uncontacted groups, even in Southern Rondônia.

² Many languages of the Guaporé region, especially those on the Bolivian side, are considered only superficially here, since not enough well-analyzed data were available to me.

³ Unfortunately, state efforts to promote literacy in the native languages have sometimes been hampered by the poor quality of the work and lack of cooperation with linguists (see also Gabas and Moore [forthcoming]).

With regard to the Kwaza, early sources (e.g., Dequech 1942, Rondon and Faria 1948, and Zack 1943) indicate that they used to live on the western headwaters of the Pimenta Bueno River and intermarried with neighboring groups of Aikanã, Kanoê, and Salamã. The Kwaza and the other groups confirm this and mention the existence of native interpreters and a certain degree of plurilingualism. It is likely that there was also contact, although less intensive, with peoples speaking Northern Nambikwara languages, such as Latundê. Today, the remaining 25 speakers of Kwaza no longer constitute a unified community. There are basically two ethnically mixed families in which the Kwaza language is spoken on a daily basis. They live to the south of their original habitat on the indigenous reserve Tubarão-Latundê, among a majority of about 150 speakers of Aikanã and as neighbors of the remaining 19 speakers of Latundê. There are also some elderly individuals who remember fragments of Kanoê, Sabanê (Nambikwara), and Salamã from their childhood. Some young Rikbaktsa (Macro-Jê) people married Aikanã, as did some Terena (Arawak) missionaries, but none of their languages are used on the reserve. Some speakers of Kwaza live in the towns of Vilhena, Pimenta Bueno, and Chupinguaia. Another family of mixed Aikanã and Kwaza ethnicity lives on the indigenous reserve Kwaza do Rio São Pedro, on traditional Kwaza lands, but here the language is no longer used. Most Kwaza speakers are trilingual in the sense that they also speak Aikanã and Portuguese.

3. The documentation and denomination of Kwaza and its closest neighbors. The first comprehensive description of Kwaza is van der Voort (2004). In addition, certain specific aspects of the grammar are discussed in van der Voort (1997; 2002a; 2002b; 2003a). The only other documentation of the language consists of brief word lists by Lévi-Strauss (1938), who refers to it as the language of the São Pedro Creek; Zack (1943), who refers to it as Coaiá; Carlson (1984), who calls it Koaia; and Vasconcelos (n.d.), who calls it Koaza. Comparison of these word lists with present-day Kwaza shows that they do represent the same language.

The earliest documented reference to the Kwaza people is found in Rondon (1916), who mentions that their Kepkiriwat (Tupi-Tupari) neighbors refer to them as Coaiá. Ethnic names often derive from denominations used by neighboring peoples. Even though the earlier sources mention the name Koaia (in various different spellings), the pronunciation of which is confirmed as [kwa'ja] by elderly speakers of Salamã, all speakers of Kwaza deny it was ever pronounced this way, claiming instead that the correct pronunciation is [kwa'da]. It is possible that [kwa'ja] is the historically correct pronunciation, and that [kwa'da] represents an Aikanã rendering since that is the only language of the region in which [d] represents a phoneme. Another possibility is that the Aikanã version [kwa'da] is the original one, which was adapted to the phonology of other languages as [kwa'ja]. At any

rate, I always use the former version, spelled as Kwaza, since this is the only version accepted by the people themselves as a(n) (auto)denomination.

The Kanoê (autodenomination) people are also known as Kapishana, but this name is not known to them. The Kanoê language was documented in word lists by Nimuendajú (1955 [from fieldwork in 1928]), who calls the speakers Kapišana, and by Zack (1943), Bontkes (1967), Moore (1988), and others, who call them Kanoê. Becker-Donner (1955) contains comparative word lists with Kanoê, Aikanã, and Tupi languages and brief phonological and grammatical sketches. Thorough linguistic research and fieldwork was initiated only in the 1990s, by Bacelar (e.g., Bacelar 1994; 1996; 2004 and Bacelar and Pereira 1996). With only five speakers spread over three different reserves, the language is on the verge of extinction.

The Aikanã (autodenomination) are referred to in the literature by many alternative names, including Kasupá, Masaká, Mondé, and Tubarão, which are essentially person names; Corumbiara, which is a river name that refers alternatively to the Kanoê and the Mekens people in certain sources; and Huari, which is not recognized by the people themselves. The Aikanã language was first documented in word lists by Nordenskiöld (1915), Zack (1943), Hanke (1956), Bontkes (1968*a*), Pickering (1968), and others. Becker-Donner (1955) contains comparative word lists and phonological and grammatical sketches. More extensive fieldwork has been done by Carlson (1984; see also Hinton 1993) and by Vasconcelos (1996; 2003), who is currently working on the language.

The Salamã (autodenomination) are sometimes also referred to as Sanamãiká. Another name, Mondé, is based on the name of a man who was at one point the chief of the Salamã. This name is also used to refer to the linguistic subfamily to which their language belongs, Tupi-Mondé. The Salamã language was documented in word lists by Zack (1943) and Hanke (1950). In addition to a word list, Becker-Donner (1955) contains a phonological and grammatical sketch. This moribund language is now remembered by only two elderly people and is being documented and studied by Denny Moore of the Museu Goeldi in Belém, Brazil.

The following lists my main consultants and other data sources (in order of importance) on Guaporé languages used in this paper:⁴

⁴ The following abbreviations are used in this paper: AIK = Aikanã (unclassified); AKU = Akütsü (Tupi-Tupari); ALL = allative; ARI = Arikapu (Jabuti); ATT = attributive; AUX = auxiliary; CL = classifier; COM = comitative; DEC = declarative; DJE = Djeoromitxi (Jabuti); EMP = emphatic; EXCL = exclusive; FOC = focus; INTENS = intensifier; KAN = Kanoê (unclassified); KWA = Kwaza (unclassified); LAT = Latundê (Nambikwara); LOC = locative; MAK = Makurap (Tupi-Tupari); MEK = Mekens (Tupi-Tupari); NAM = Nambikwara; N = noun; NOM = nominalizer; p.c. = personal communication; PL = plural; POR = Portuguese; POS = possessive; REF = referential; SAB = Sabanê (Nambikwara); SAL = Salamã (Tupi-Mondé); sp = species; SIR = Sirionó (Tupi-Guarani); TRA = transitivizer; TUP = Tupari (Tupi-Tupari); v = verb; WAY = Wayuru (Tupi-Tupari).

LANGUAGE	FAMILY	SOURCES
<i>Aikanã</i>	[Unclassified]	field data provided by Raimunda, Canderé, Paulo, Manuel, Mario, and others; Vasconcelos (2003 and p.c.), Becker-Donner (1955), Carlson (1984), Hinton (1993), Hanke (1956)
<i>Akũtsũ</i>	[Tupi-Tupari]	field data provided by Konimbatsu
<i>Arikapu</i>	[Jabuti]	field data provided by Nazaré and Mamoa
<i>Djeoromitxi</i>	[Jabuti]	field data provided by Nazaré, Raimundo, André, and others; Pires (1992)
<i>Itonama</i>	[Unclassified]	Crevels (2002 <i>b</i> and p.c.)
<i>Kanoê</i>	[Unclassified]	Bacelar (1996; 2004; and p.c.); field data provided by Munuzinho
<i>Kwaza</i>	[Unclassified]	field data provided by Mario, Maria Edite, Antonhão, Antônio, Zezinho, Edileusa, and others; Zack (1943)
<i>Latundê</i>	[Nambikwara]	Telles (2002 <i>a</i> ; 2002 <i>b</i> ; and p.c.); field data provided by João Latundê
<i>Makurap</i>	[Tupi-Tupari]	field data provided by Basílio and Nazaré
<i>Mekens</i>	[Tupi-Tupari]	Galucio (2001), Becker-Donner (1955), Hanke et al. (1958)
<i>Nambikwara</i>	[Nambikwara]	Kroeker (2001), Lowe (1999)
<i>Purubora</i>	[Tupi]	Bontkes (1968 <i>b</i>), Moore (p.c.)
<i>Sabanê</i>	[Nambikwara]	Araujo (2004)
<i>Salamã</i>	[Tupi-Mondé]	Becker-Donner (1955), Zack (1943); field data provided by Peridalva and Maria
<i>Sirionó</i>	[Tupi-Guarani] ⁵	Schermair (1958)
<i>Tupari</i>	[Tupi-Tupari]	field data provided by Konkwat and Kaptsugu; Caspar (1975)
<i>Wayuru</i>	[Tupi-Tupari]	Moore and Galucio (1994); field data provided by Durafofo

4. Characteristics of Kwaza. Kwaza has eight oral and seven nasal vowel phonemes (see table 1). The phonetic values of /a/ and /o/ are [a] and [ɔ] respectively. The value of /i/ is somewhere between IPA [ɛ] and [i]. The nasalized equivalents of these vowels have similar qualities. Even though there are minimal pairs that confirm the reality of the round central vowel /œ/, its occurrence is very rare; it is attested in only three lexical items of sound-symbolic origin.

⁵ One candidate for Tupi-Guarani influence in Southern Rondônia could be the possibly extinct Bolivian Pauserna/Guarasugwé language. According to Nordenskiöld (1915:371), the Pauserna referred to the Aikanã as Huari. Here, I have used the neighboring Sirionó language to represent Tupi-Guarani.

TABLE 1
KWAZA VOWEL PHONEMES

	Oral Vowels			Nasal Vowels		
	Front	Central	Back	Front	Central	Back
Closed	<i>i</i>		<i>u</i>	<i>ĩ</i>		<i>ũ</i>
Closed-mid	<i>e</i>	<i>ɨ</i>		<i>ẽ</i>	<i>ɨ̃</i>	
Closed-mid	<i>ɛ</i>	<i>æ</i>	<i>o</i> [ɔ]	<i>ẽ</i>		<i>õ</i> [ɓ]
Open		<i>a</i> [a]			<i>ã</i> [ã]	

TABLE 2
KWAZA CONSONANT PHONEMES

	Labial	Lamino-alveolar	Apico-alveolar	Palatal	Velar	Glottal
Plosive	<i>p</i>	<i>t</i>	<i>c</i> [t̠]		<i>k</i>	ʔ
Implosive	<i>b</i> [ɓ]		<i>d</i> [ɗ]			
Affricate		<i>ts</i>		<i>tx</i> [tʃ]		
Fricative		<i>s</i>	<i>x</i> [s̠]			<i>h</i>
Nasal	<i>m</i>		<i>n̠</i>	<i>ɲ</i> [ɲ]		
Trill/tap			<i>r</i>			
Lateral			<i>l</i>			
Approximant	<i>w</i>			<i>j</i>		

Table 2 inventories the 19 consonant phonemes of Kwaza. The phonetic value of /tx/ is [tʃ]. The value of /x/ is an extra retracted apico-(post-)alveolar voiceless fricative [s̠] (resembling [ʃ]) and the value of /c/ is a voiceless extra retracted post-alveolar voiceless plosive [t̠] (resembling [c]). The implosive /b/ and /d/ are always realized as [ɓ] and [ɗ] respectively. Even though there are minimal pairs contrasting /ts/, /s/, and /x/, and /c/ and /tx/, there is some free variation between /ts/ and /s/, between /s/ and /x/, and between /c/ and /tx/ in certain words, depending on the individual speaker. The velar /k/ is often palatalized before front vowels. The glottal stop is predictable in morpheme-initial position but phonemic elsewhere.

Main word stress is predictable on the last syllable of the root and is indicated in examples by an apostrophe ['] that precedes the stressed syllable in a polysyllabic word. Kwaza syllable structure is predominantly (C)V. Complex onsets are possible, however, in which a second consonant is an approximant /w/ or /j/. In addition, vowel-vowel sequences are allowed, in which the second vowel is /i/, /u/, or /i/. The language has no consonant clusters other than consonant-glide combinations. Kwaza does not have phonemic tone, stress, or length.

The basic word classes of Kwaza are verbs, nouns, and adverbs. Kwaza is a morphologically complex nonconfigurational language. Most of the grammar of the language is contained in derivational and inflectional verbal

suffixes. There are only a few nominal and adverbial suffixes and two demonstrative prefixes. The optional derivational suffixes hold an intermediate position between the lexical root and the obligatory inflectional suffixes. Where the root is extended by derivational morphemes, main word stress indicates the last syllable of the extended root, but it does not fall on inflectional suffixes (except in quotative constructions; see van der Voort 2002a). I consider grammatical categories like classifiers, directionals, valency-changing suffixes, tense, modality, and aspect in Kwaza as derivational. The obligatory morphosyntactic categories subject and mood are inflectional. First, second, and third person are distinguished, as are first-person inclusive and exclusive and second-person plural. There is otherwise neither grammatical number nor gender in the language. In addition to the declarative and interrogative moods, there is a set of persuasive and prohibitive moods in matrix clauses. Subordinate clauses may be inflected for conditional and concessive. Switch reference is distinguished in co-subordinated clauses. Nouns can be marked for animate object case or for one of the oblique cases. In addition to person inflection on the verb, corresponding pronouns may be used for emphasis. Reduplication (see van der Voort 2003a) and ellipsis of either roots or inflectional elements (see van der Voort 2002a) have important grammatical consequences. The language is moderately polysynthetic, but there are no complex morphophonological processes. Possessive and demonstrative constructions are dependent-marking and the sentence level combines head-marking with dependent-marking (subjects marked on the predicate and animate objects on the argument). Word order is relatively free but, with the exception of attributives, most constructions are head-final. When there are two overt arguments, SVO is the most frequent order in the sentence. Otherwise, the orders are SV and OV. For more details on Kwaza and the actual data, see van der Voort (2004). The basic characteristics of the neighboring languages are touched upon briefly in 6.

5. The classification of Kwaza and its neighbors. Until recently, non-native speakers' knowledge of Kwaza was based only on the above-mentioned four short word lists from the twentieth century. A few lexical items from these lists were used in attempts to classify the language. As a result, Loukotka (1950:128) first lumped it (as "unknown from the São Pedro creek") together with Kanoê ("Kapišana").⁶ Later, he (1963; 1968) and Rodrigues (1986) classified Kwaza as an isolate language, whereas Greenberg (1987:383) classified it as a Macro-Tucano language. However, since Kwaza

⁶ Of "Quaiá," he writes (1950:137), "unknown language of a small tribe on the Apidiá river, Matto Grosso" (my translation—note that the Pimenta Bueno River is also called Apediá, which is probably a name of Salamã origin, and that, before 1943, Rondônia was part of the "West of Mato Grosso").

was otherwise completely undocumented, these classifications were never confirmed by thorough investigation.

The same is true for the neighboring unclassified languages Aikanã and Kanoê. Greenberg (1987:383) also classified them as Macro-Tucano, whereas Loukotka (1968) and Rodrigues (1986) classified them as isolates. Kaufman (1990:48–49) classified Kanoê, under the name Kaphishaná, as forming a 49-century-old stock with Kunsá (an Andean language spoken in Bolivia and Chile, also called Atakama), but no evidence has ever been put forward for that.⁷ Price (1978:31–32) reports that he compared Sabanê (Nambikwara) to Aikanã and Kanoê, but his conclusion that the latter two might be Nambikwara languages has also never been confirmed.

The Jabuti languages were classified by Greenberg (1987:386) as Macro-Jê. This possibility had already been raised in 1935 by Nimuendajú (2000: 220–21) on the basis of 12 supposed cognates. Although this classification is not adopted here, because its basic hypothesis was never seriously tested, it may be valid. Swadesh's (1959) idea to lump the Jabuti languages together with Kanoê and Kunsá, however, is not realistic. Therefore, with regard to the classification of the languages traditionally spoken in the vicinity of the Kwaza, only the Tupi and Nambikwara language families are reliably established genetic units.⁸

Although thorough comparative research still needs to be done, I have come across some linguistic similarities between Kwaza and its neighbors during my descriptive work. Kwaza appears to share quite a few formal and structural features with Kanoê and somewhat less with Aikanã. Furthermore, there are some similarities with Jabuti and Tupi languages and a trifle with Nambikwara, Tacana, and unclassified Bolivian languages. Finally, there are a small number of lexical similarities with languages outside of the Guaporé region. Explanations for these similarities could include genetic relationships, areal phenomena, direct language contact, or coincidence.

In the following sections, I present these similarities and try to understand their significance for the relationships that may exist between Kwaza and other languages. Section 6 contains all corresponding lexical and morphological items encountered so far; 7 discusses the systematic sound correspondences that are revealed by the previous lexical comparisons; and in 8, I present

⁷ Kaufman adopts this classification from Swadesh (1959). The Kanoê language is listed as number 100 in Kaufman (1990:48). Elsewhere (1990:54), he refers to Itonama by this number. Itonama, which is otherwise number 98 in Kaufman's list, is an unclassified language from Bolivia. Whatever the mistake here, either a wrong number or a wrong name, no evidence has ever been put forward that supports a reliable classification of either Itonama or Kanoê.

⁸ For useful overviews of the classification of the Tupi family, see, e.g., Campbell (1997:199–202) and Rodrigues (1986; 1999). For Nambikwara, see Price (1978) and Telles (2002a:24–28).

evidence for structural similarities between Kwaza and several languages of the region. Some possible explanations are discussed in the conclusion.

6. Lexical similarities. This section contains lists of forms from Kanoê, Aikanã, Jabuti, and Tupi languages, in that order, compared to equivalent forms from Kwaza. Every entry starts with an item from the language to which Kwaza is compared. This is followed by an English translation of that item, then the Kwaza equivalent, and finally an English translation of the Kwaza item when its meaning differs from the neighboring language (otherwise, there is a dash). When applicable, the longer lists are divided into subsections indicating whether an item matches items from Swadesh's lexicostatistical basic 100 word list (the complete list is given in Appendix A), whether it belongs to wider vocabulary, whether it is a probable borrowing, whether it is a grammatical element, or whether it is probably sound symbolic in origin, respectively. This makes it easier to evaluate its importance as evidence for possible genetic relationships: onomatopoeia being less important than basic vocabulary (e.g., Hock 1991:558, Kaufman 1990:24, and Campbell 1998:321), for example, and likely borrowings obviously not being suited at all for this purpose. Section 6.5 is devoted entirely to borrowings shared by more than two languages.

Note that the term "basic vocabulary" refers to items from Swadesh's basic 100 word list. By "wider vocabulary," I mean all other lexical items, although borrowings and sound symbolic forms are listed separately. Note also that the lists contain only the items that show a combination of formal and semantic similarities, and not items that are different in these respects. Note too that bound grammatical elements may occur in the basic vocabulary sections if justified by their semantic content. Note finally that I do not necessarily regard the similar forms in the lists below as cognates. They are POTENTIAL cognates at best. I am aware that some of the corresponding forms are less convincing as cognates than others. I have listed those pairs of forms that I perceive as relatively highly similar first, whereas the less similar forms occur toward the end of a list.

The data from Kwaza and other languages of the region cited below are mostly in the International Phonetic Alphabet, with some exceptions. The symbols <a>, <o>, and <ñ> represent IPA [a], [ɔ], and [ɲ] respectively. Where possible, items from published sources are adapted to these conventions, except for certain symbols in, e.g., Becker-Donner (1955), where <ɔ> is IPA [o] and grave and acute accent marks indicate tone. The status of the transcription of the Kwaza, Kanoê, Aikanã, Mekens, and Jabuti data is phonemic, unless otherwise indicated. The transcription of data from other languages is phonetic (in certain written sources, such as Nordenskiöld 1915, the status is unspecified).

I analyze all complex forms morphologically upon their first occurrence and indicate morpheme boundaries with a hyphen. The key to abbreviations used in glosses appears in n. 4. Long forms that contain lexicalized or unproductive segments are not considered as complex, though they may be provided with an etymological analysis when necessary.

6.1. Kanoê. According to Bacelar (2004), the phonological system of Kanoê comprises seven oral vowels /i, i, u, e, æ, o, a/ and seven nasal vowels /ĩ, ỹ, ã, ẽ, ǣ, õ, ǣ/. The most widespread allophone of /e/ is [ɛ]. The consonant system includes 11 phonemes /p, t, k ts, m, n, r, ñ, v, w, j/. The glides [j] and [w] are always considered as consonantal phonemes. Phonemic status is not assigned to the glottal stop since it occurs in predictable environments only, with the exception of certain sound-symbolic forms. Main word stress is predictable on the last syllable. Kanoê is a highly complex language morphologically, with many classifying morphemes and a number of valency-changing morphemes. It also has an intricate system of declinations for verbal person marking, which involves prefixes, infixes, and suffixes. In that respect it resembles Aikanã, whereas Kwaza has a much simpler person-marking system. Kanoê is a nonconfigurational language with the same marking characteristics and basic order as Kwaza, except at the sentence level where the predominant word order is SOV.

6.1.1. Basic vocabulary. With a few exceptions, such as ‘stone’, ‘liver’, ‘seed’, the items in the following list do not show a high degree of similarity. This is what one would expect when the temporal distance between the languages is so great.

KANOÊ	ENGLISH	KWAZA	
<i>a'ki</i>	stone	<i>ha'ki(-dwa)</i> ⁹	—
<i>i-'ri</i>	liver ¹⁰	<i>e-'ri</i>	—
<i>-ko</i>	seed (hard fruit) ¹¹	<i>-ko</i>	—(CL)
<i>-tæ</i>	round	<i>-tɛ</i>	—(CL)
<i>-tsi</i>	big	<i>tfĩ-</i>	—(v)

⁹ The KWA element *-dwa* ‘stone’ is a classifier which is attached to the noun by the younger generation. In Lévi-Strauss (1938) and Zack (1943), this classifier is absent. See also n. 31 below.

¹⁰ The frequently occurring KAN element *i-* and the KWA element *e-* represent a semantically empty formative root that lends independent nominal status to a bound classifier. This element is discussed in 8.2.

¹¹ In a strict sense, ‘tiny plant seed’ in KAN is *te'kwa* and in KWA *e-'sĩ*. However, both languages use the classifier *-ko* for the kind of small, hard, nutlike seeds on most types of Amazonian palm trees. Furthermore, KWA *-to* refers to modestly sized round objects in general.

<i>i-ku'ta, kuta</i>	head	<i>tsu'ti, -kufi</i>	—(N, CL) ¹²
<i>i-'kãj</i>	eye	<i>e-'tũĩ (e-'kãĩ)</i>	—(mouth, face)
<i>i-te'kwa</i>	belly	<i>e-'tẽ</i>	—
<i>i-ko'tso</i>	hand	<i>tso'je, -koje</i>	—(N, CL)
<i>i-tso'tsi</i>	foot ¹³	<i>to'ha, -toha</i>	—(N, CL)
<i>jĩ</i>	hair	<i>e-'sĩĩ</i>	—
<i>tẽ'ki</i>	louse	<i>sĩ'ĩĩ</i>	—
<i>væ-</i>	rain	<i>awe-</i>	—(v)
<i>i-'ñãj</i>	egg	<i>e-'ni</i>	—
<i>æ'wo</i> ¹⁴	husband	<i>e-'swa</i>	—
<i>uru-</i>	new	<i>arwa-</i>	—(v)
<i>i-'nĩ</i>	fire, firewood ¹⁵	<i>hi</i>	—
<i>i-nĩ-ti'nũ</i>	ash ¹⁶	<i>hinũ'nã</i>	—
<i>tetej-</i>	walk	<i>tutu-</i>	walk, tread (v)

6.1.1.1. Less probable cognates in basic vocabulary. The following items from the basic vocabulary are excluded from the figures used to estimate possible time depth (in 6.6). These items are partially similar in form, but this may be due to chance rather than to anything else. Furthermore, comparativists have cautioned against contrasting relatively short forms because of the greater possibility of chance resemblances (Hock 1991:558 and Campbell 1998:322). However, had I excluded all simple forms from the basic vocabulary, not much would be left for lexical comparison. Therefore, I excluded only those that seem to occur also in other languages of the region.

¹² Both in Kanoê and in Kwaza, the classifier for 'head' is used also for big round objects. Note that there are similar forms in several unrelated and geographically distant Amazonian languages, such as Awakê (Isolate) *kakoati* (Rodrigues 1986:97), Harakmbut (also Amarakaeri) *-ki* (Hart 1963 and Adelaar 2000), and Katukina *-ki-* (Adelaar 2000); Máku (Isolate) *kete* (Rodrigues 1986:97); Trumai (Isolate) *kuta* (Guirardello 1999). This is probably coincidence (note, e.g., Dutch *kop* 'head').

¹³ It is unclear whether the unidentifiable element *-tso-*, which occurs in both the form for 'hand' and 'foot' in Kanoê, corresponds to either the unidentifiable element *tso-* or *to-* in the Kwaza forms. Note also the respective Kwaza classifiers and the correspondence between velar and alveolar plosives, both across and within the languages, as observed in 7.1. It is difficult to disentangle the ways these items could be related.

¹⁴ The first syllable of the Kanoê form may represent a fossilization of the empty root mentioned in n. 10 above.

¹⁵ Both languages have the same semantic extension of 'fire' to 'firewood'.

¹⁶ In both forms, the element *-nũ-* occurs, which probably represents a classifier for 'powder'. In the Kwaza form, it is fossilized with the word *hi* 'fire' and an unidentified element *-nã*. In Kanoê, it is part of the classifier *-tinu* 'porridge, powder' combined with the empty root and the element *-ni* 'fire' (Bacelar 2004:112).

KANOÊ	ENGLISH	KWAZA	
<i>ka</i>	bite	<i>kahe-</i>	— ¹⁷ (v)
<i>kĩ-</i>	burn (of a person)	<i>ke-</i>	burn ¹⁸ (v)
<i>i-'taw</i>	tongue	<i>tu'ku</i>	—
<i>ñũ'tfi</i>	sand	<i>tsũrũrũ'nĩ</i>	—
<i>woro-</i>	black	<i>ho'ho-</i>	—(v)
<i>kwi'kaj</i>	sun	<i>ko'sa</i>	—
<i>kwinĩ</i>	fish	<i>mani'ni</i>	—

6.1.2. Wider vocabulary. Unlike the basic vocabulary, a number of items in the wider vocabulary show considerable similarity in form. The ones that are probably borrowings are listed in **6.1.2.1** below.

KANOÊ	ENGLISH	KWAZA	
<i>tĩri-</i>	tie	<i>tĩri-</i>	untie (v)
<i>dwa-</i>	break	<i>d̥w̥ʒ-</i>	—(v)
<i>ko'ro</i>	nephew	<i>ko're</i>	—
<i>tij'ko</i>	chigger, flea	<i>s̥i'to</i>	chigger (sand flea)
<i>i-'kaw</i>	shinbone	<i>e-'kai</i>	leg
<i>kwa're</i>	shell	<i>d̥e're</i>	—
<i>a'tso</i>	village	<i>ha'so</i>	hive
<i>ae're</i>	ax	<i>a'l̥e</i>	—
<i>nã'ke</i>	female	<i>jã'kĩ</i>	sister
<i>eh</i>	tobacco	<i>ui</i>	—
<i>i'ri</i>	capuchin monkey	<i>hĩ'ri</i>	—
<i>ĩro</i>	woolly monkey	<i>hĩri-ko'ro</i>	(lit. 'monkey-arm')
<i>tsõjtsõj</i>	small colibri	<i>t̥ẽ'su</i>	hummingbird
<i>to'kĩ</i>	papaya	<i>taĩ</i>	—
<i>tfi'ĩ</i>	tucandeira ant	<i>tsi'le</i>	ant (various species)
<i>nũ'ti</i>	grandchild	<i>koreʔanĩ'te</i>	—
<i>mũko'ko</i>	pupunha palm	<i>haku'ku</i>	—
<i>kore'nũ</i>	tayra	<i>hu're</i>	—
<i>u'ræ</i>	wild pig	<i>d̥utu're</i>	—
<i>kwinike'te</i>	traíra fish	<i>sunũ'te</i>	—

6.1.2.1. Wider vocabulary that probably represents borrowing. Certain items from the wider vocabulary are almost identical. Their similarity is

¹⁷ Aikanã has a similar form; in Cavineña (Tacana) it is *karu-* (Guillaume 2004:137); in Moré (Chapakura) the form *kawwa* 'eat' is similar (Angenot-de-Lima 2002:498); and note also, e.g., Dutch *kauwen* 'chew'.

¹⁸ Arikapu and Sirionó have similar forms, and note also Portuguese *queimar* 'burn', *quente* 'hot'.

probably too close to be attributable to genetic relatedness between languages otherwise as different as Kanoê and Kwaza. If there were a long-distance genetic relationship between these languages, one would expect the cognates to look quite different (apart from certain sound correspondences, of course; see 7.1). After all, it is hard to imagine that cognate forms in separate languages would remain identical, or develop identically, for thousands of years. Therefore, it is unlikely that the forms listed below represent cognates. Rather, they must be the result of language contact and thus represent borrowings. The fact that the majority of these highly similar forms refer to utensils and domesticated plants and animals seems to confirm this. One would assume that, when newcomers enter the territory of another group, the names of plants and animals that were unknown to the newcomers are borrowed from the native group.¹⁹ An alternative explanation for the likely borrowings could lie in trade relations, since the elderly people say that in traditional times, trade took place between the different groups.

KANOÊ	ENGLISH	KWAZA	
<i>pura</i>	cicada	<i>pu'ra</i>	moth
<i>tæ'ræj</i>	pacu fish	<i>te'rei</i>	—
<i>ta'ra</i>	annatto	<i>to'ro</i>	—
<i>a'va</i>	parrot	<i>a'wɨ</i>	—
<i>tsãkãw'nũ</i>	stingray ²⁰	<i>tsaka'rũ</i>	—
<i>mĩ'to</i>	pariri tree/fruit	<i>mĩ'do</i>	—
<i>o'mũ</i>	rubber milk/latex	<i>hu'mũ</i>	—
<i>tæ'mũ</i>	duck	<i>da'mũ</i>	—
<i>tõ'ki</i>	caterpillar	<i>da'kii</i>	—
<i>tome'ro</i>	wooden ladle	<i>duma'ru</i>	—
<i>da'tfi</i>	rubber ball	<i>dodotfi'-tɛ</i>	(lit., 'rubber-round')

6.1.3. Grammatical elements. The close formal and functional similarity of certain grammatical elements points to borrowing or areal diffusion. The elements listed here are discussed in 8 below.

KANOÊ	ENGLISH	KWAZA	
<i>-mũ</i>	liquid	<i>-mũ</i>	—(CL)
<i>i-</i>	(empty root)	<i>e-</i>	—
<i>-ja-</i>	hither, downward	<i>-ja-</i>	thither
<i>-kete-</i>	EMP	<i>-tete-</i>	INTENS

¹⁹ Kaufman (1990:18) actually proposes that names of local flora, fauna, tools, and social categories should not be considered as reliable data for comparative work.

²⁰ There may be a relationship with MEK *tjarãw*, as in Hanke et al. (1958:216).

-to-	TRA	-ta-	—
-ñĩ	LOC	-na	—
-tinũ	powder ²¹	-nũ	—(CL)
-te	(pronominal PL)	-tse	—

6.1.4. Words containing sound symbolism.

KANOÊ	ENGLISH	KWAZA	
<i>ãvã'kã</i>	heron species	<i>ãwã'ka</i>	—
<i>tsĩ'tsĩ-hõ'hẽ</i>	kazoo flute ²²	<i>kai-hũ'hẽ</i>	—
<i>tʃõj'ra-</i>	kiss	<i>tsjõ-</i>	—(v)
<i>ew?ew-</i>	vomit	<i>eu-</i>	belch
<i>vovo'tfĩ</i>	owl species	<i>woukĩ'dĩ</i>	—
<i>akiki-</i>	scream	<i>sĩsĩ-</i>	—(v)

6.2. Aikanã. According to Vasconcelos (2003), the phonological system of Aikanã comprises six oral vowels /i, ø, u, ε, o, a/ and four nasal vowels /ĩ, ã, ê, ã/. The consonant system includes 16 phonemes /p, b, t, d, k, ʔ, h, ð, s, tʃ, m, n, r, ñ, w, j/. Note that Vasconcelos analyzes [y] and [ø] (she writes <ü> and <ö>, respectively) as allophones of /ø/; however, I have preserved the phonetic distinction in my own data. Also, her analyses of [ə] and [i] as allophones of /a/ and [õ] as an allophone of /ũ/ are not implemented here. Furthermore, she analyzes [ʒ] as an allophone of /j/ before /i/ and /ø/, and [z] as an allophone of /ð/. The preferred allophones of /b/ and /d/ could be implosive, and I have indicated some clear instances here.²³ The glottal stop is phonemic in word-internal positions. Main word stress occurs most often on the penultimate or antepenultimate syllable, but there are minimal pairs for stress, e.g., *hi'ne* 'fire' vs. *'hine* 'resin, wax'. Aikanã is a morphologically very complex language. Like Kanoê and Kwaza, it has many classifying and valency-changing morphemes. Its system of different declinations for verbal person marking, which involves different types of affixes, is as complicated as that of Kanoê, unlike Kwaza. Also, Aikanã is a nonconfigurational language with the same marking characteristics and basic order as Kwaza,

²¹ Note that the classifier *-ti'nũ* also signifies 'porridge' when it concerns edible substances (Bacelar 2004:112), a meaning which is shared with certain combinations in Kwaza, such as *atʃitʃi-'nũ* 'maize porridge'.

²² This cracked bamboo tube is a sacred musical instrument, through which men representing the spirits of old would sing with distorted voices, accompanied by bamboo flutes. In the Kanoê, Kwaza, and Aikanã forms, the first element means 'grandfather' and the second element is considered as sound-symbolic by speakers, hence, literally 'grandfather-kazoo'.

²³ Vasconcelos (2003) analyzes them as preglottalized. The frequent occurrence of preglottalized allophones of other consonants, such as /tʃ, n, ñ, j, w/, supports her analysis.

except at the sentence level, where the predominating word order is SOV, as in Kanoê.

6.2.1. Basic vocabulary. The same observation made about Kanoê in 6.1.1 above can be made here: the items in the following list are not highly similar, which is to be expected if the time divergence were great.

AIKANĀ	ENGLISH	KWAZA	
<i>i:’ri</i>	liver ²⁴	<i>e-’ri</i>	—
<i>ka-re’mũ</i>	knee ²⁵	<i>e-ro’mũ</i>	upper and lower thigh
<i>sũ</i>	swim	<i>tsũ-</i>	—(v)
<i>zu</i>	bone	<i>tsu</i>	—
<i>hi’ne</i>	fire	<i>hi</i>	—
<i>ha’ne</i>	water	<i>hã</i>	—
<i>mũj</i>	tooth	<i>-mãi</i>	—(CL)
<i>ha’zi</i>	stone	<i>ha’ki(-dwa)</i>	—
<i>ji, zi</i>	hair	<i>e-’sãi</i>	—
<i>kij</i>	louse	<i>sã’hi</i>	—
<i>-ðãw</i>	round	<i>-tẽ</i>	—(CL)
<i>kij’dẽ</i>	horn	<i>e-’ke</i>	horn, cob
<i>hi’nũ’nũ</i>	sand	<i>tsũrũrũ’nĩ</i>	—
<i>’ðũpa’pa</i>	ash ²⁶	<i>hinũ’nã</i>	—
<i>awã-</i>	sleep	<i>wãwã-</i>	—(v)
<i>deťja</i>	woman	<i>e-’taĩ</i>	—
<i>ka-ta’pa</i>	belly	<i>e-’tẽ</i>	—
<i>kja’wĩj</i>	cold	<i>awĩ-</i>	—(v)

The verb *kaw-* ‘bite’, Kwaza *kahẽ-*, is excluded on the grounds mentioned in 6.1.1.1 and in n. 17.

6.2.2. Wider vocabulary. The forms in the wider vocabulary show more similarity than those in the basic vocabulary. One possible explanation is that they are cognate; another is that they represent old borrowings.

AIKANĀ	ENGLISH	KWAZA	
<i>wĩ-, wi-</i>	cut	<i>wi-</i>	—(v)
<i>durẽrẽ-</i>	roll	<i>durĩri-</i>	—(v)
<i>ary’mẽ</i>	tapir	<i>ã’rũi</i>	—

²⁴ Aikanã lacks an empty root, as in Kanoê and Kwaza, but it may be fossilized in the Aikanã form here.

²⁵ The AIK element *ka-* represents a body-part prefix.

²⁶ The AIK syllable *ðũ-* sounds quite like [nũ] and may therefore be somehow related to the classifier *-nũ* ‘powder’. In the corresponding Kwaza item, this classifier is lexicalized together with *hi* ‘fire’ and *-nã*, which is an unidentifiable element (see also n. 16).

<i>ha'zu</i>	hive	<i>ha'so</i>	—
<i>'waru</i>	wheel	<i>wiruni'te</i>	mill, pestle
<i>wε'ry</i>	field	<i>e-'ri</i> ²⁷	—
<i>nenũ</i>	feces	<i>ñũ</i>	—
<i>aky'nũ</i>	chigger (micuim)	<i>kiki'ñũ</i>	—
<i>a'ra</i>	cacau	<i>ere'to</i>	—
<i>tʃɛtʃɛpɛ'rjyo</i>	moth	<i>pura</i>	—
<i>biryrwĩ</i>	bird species	<i>ɔjuru'te</i>	—
<i>pi'ratfy'ri</i>	Pseudomyrna	<i>so'ro</i>	—
<i>tʃi'rute</i>	japoeira bird	<i>ĩsĩ'lo</i>	—
<i>tʃiki'ti</i>	vagina	<i>i'tʃi</i>	—
<i>hadidi</i>	mushroom	<i>ha'he</i>	—
<i>ha'ni</i>	bamboo	<i>hã'si</i>	—
<i>kwe-</i>	swallow	<i>kui'hĩ-</i>	—(v)
<i>?mã?mã'ʔi</i>	chicha beer ²⁸	<i>mũu</i>	—
<i>'(h)ãdy</i>	porcupine	<i>asu</i>	—
<i>ka-dø'ka</i>	leg	<i>e-'kai</i>	—

6.2.2.1. Wider vocabulary that probably represents borrowing. The following forms are too similar to regard them as possible cognates in a long-distance genetic relationship. They are probably borrowings. Like the items in **6.1.2.1**, they all involve plant, animal, or utensil names.

AIKANĀ	ENGLISH	KWAZA	
<i>ma'ru</i>	deer	<i>mã'ru</i>	donkey, horse ²⁹
<i>ka'susu</i>	hare	<i>katsu'tsu</i>	—
<i>hadø'rø</i>	coati	<i>hadu'ru</i>	—
<i>ta'ra</i>	annatto	<i>to'ro</i>	—
<i>'terε</i>	pacu fish	<i>te'rei</i>	—
<i>a'wa</i>	parrot	<i>a'wi</i>	—
<i>davi'vi</i>	kingfisher	<i>duwiwi'su</i>	—
<i>ha'rø</i>	armadillo	<i>haru'rai</i>	—
<i>(h)iri'ri</i>	tamandua	<i>sirisi'ri</i>	—

²⁷ The Kwaza form, which contains the empty root discussed in **8.2** and the classifier *-ri* 'flat', is homophonous to the word for 'liver'. It should be analyzed as *∅-flat*, unlike the Aikanā word.

²⁸ Note also the SAL form *ma-'ʔi* 'POSSESSABLE-chicha'. The KAN word is *tʃe'ro*, which resembles ARI *tʃue'ri*, MEK *tiéro*, and WAY *tye'ru*.

²⁹ This is possibly a loanword from Aikanā, where the meaning of *ma'ru* 'deer' was extended to exogenous species like 'cow, horse, donkey, mule', whereas in Kwaza the item refers exclusively to these exogenous species. In KWA, *a'ʔũ* is 'deer'. KWA *ã'rũi* 'tapir' can also be used for 'cow, horse, mule' as well, whereas AIK *ary'mε* only refers to 'tapir'. Note also Itonama (unclassified) *ku'mare* 'deer' (M. Crevels, p.c.).

<i>kuja'bu</i>	bird species ³⁰	<i>kuja'ʔu</i>	—
<i>wawa</i>	file	(<i>haki'</i>)- <i>dwa</i> ³¹	stone (CL)

6.2.3. Grammatical elements. The close formal and functional similarity of certain grammatical elements points to borrowing or areal diffusion. Most of the elements listed here are discussed in 8 below.

AIKANĀ	ENGLISH	KWAZA	
- <i>mũ</i>	liquid	- <i>mũ</i>	—(CL)
- <i>nũ</i>	porridge, powder	- <i>nũ</i>	—(CL)
- <i>ete-</i>	ALL/COM	- <i>ete-</i>	COM
- <i>zu</i>	bone	- <i>su</i>	—(CL)
- <i>ne</i>	LOC	- <i>na</i>	—
<i>ka-ʔdita'ka</i>	wing	(-) <i>ta'ke</i> ³²	—(CL)
- <i>te</i>	(pronominal PL)	- <i>tsẽ</i>	—
- <i>za-</i>	TRA	- <i>ta-</i>	—

6.2.4. Words containing sound symbolism. For a number of items in the following list, it is difficult to tell whether they are sound symbolic or whether they represent more animal and plant name borrowings.

AIKANĀ	ENGLISH	KWAZA	
<i>oho-</i>	cough	<i>oho-</i>	—(v)
<i>ku:'ku</i>	cicada	<i>ku'ku</i>	—
<i>hãwãkã'ʔi</i>	heron	<i>ãwã'ka</i>	—
<i>kaw'kaw</i>	carrion	<i>ka'kau</i>	—
<i>kuturẽ'ʔu:</i>	cock-a-doodle-doo	<i>kuturu'ʔu:</i>	—
<i>jãw'ʔi</i>	cat	<i>jãu</i>	—
<i>tfĩtfĩ'pu</i>	locust	<i>tfĩtfĩ'lu</i>	—
<i>ã</i>	bee species	<i>wã</i>	—
<i>hyrydy'dy</i>	trupeiro bird	<i>hyy'ryp</i>	chant of trupeiro
<i>atuwẽ-'he'ĩ</i>	kazoo flute	<i>kai-hũ'hẽ</i>	—(see n. 22)

³⁰ The Portuguese name for this bird species (*Nyctidromus albigollis*), which again originates from Nheengatu, is somewhat similar: *curiangu*.

³¹ See also n. 9. Nordenskiöld (1915:372) mentions *huahuá* and Zack (1943) *uá-uá* for 'stone' in AIK, but the actual referent of *wa'wa* is the type of stone out of which stone files and stone axes used to be made, in KWA *ka'sa'ri*. In traditional times, the stone used in the region for axes was obtained by trade with the Nambiquara and paid for with arrow cane (D. Moore, p.c.).

³² The independent KWA noun *take* 'wing' can also be used as a bound classifier.

<i>dara'kwa</i>	saracura bird	<i>dārā'ku</i>	—
<i>hahojapa'ʔi</i>	yawn	<i>hahai-</i>	—(v)
<i>kā'kāi, pā'jīj</i>	toucan	<i>mārākā'kā</i>	—
<i>ḍuri'dua</i>	bird species	<i>tfuḍurika'wa</i>	—
<i>ʔneʔneri'pe</i>	parakeet	<i>tfupē'pē</i>	—
<i>pupu're</i>	owl species	<i>ḍuḍuḍuḍi-</i>	(owl is) calling (v)
<i>tfyry'tfyruwa</i>	tinamou bird	<i>sirisiri-ʔe'kai</i>	(lit., 'sirisiri-legs')
<i>wo'wīj</i>	owl species	<i>wouki'dī</i>	—

6.3. Jabuti languages. According to a preliminary analysis (van der Voort 2002c), the phonological system of Arikapu, one of the two Jabuti languages, comprises seven oral vowels /i, i, u ɛ, ə, o, a/ and six nasal vowels /ĩ, ã, ẽ, õ, ẽ, ẽ/. There might be an eighth oral vowel phoneme /e/. The consonant system includes 13 phonemes /p, b, t, d, k, ʔ, h, tʃ, m, n, r, w, j/. There are some marked differences from the phonology of Djeoromitxi, the other Jabuti language, which has a central rounded vowel /ø/ and a set of heterorganic affricate consonants /tʃ/, /dʒ/, /ps/, and /bz/. The Jabuti languages are relatively isolating languages. There are some prefixes and suffixes for person marking that seem to be partially distributed according to an ergative pattern. Basic word orders are SOV and OVS.

Many of the formal similarities between Kwaza and Jabuti are not very close, but those that do show a high degree of similarity are mainly animal names. The similar grammatical items are all the more striking since the Jabuti languages have no obvious classifier system. Probable borrowings are given in 6.5 below.

6.3.1. Basic vocabulary.

ARIKAPU	ENGLISH	KWAZA	
<i>kə'rəj</i>	walk	<i>kerai-</i>	walk, leave, go (v)
<i>-tʃitʃi</i>	big	<i>tʃi-</i>	—(v)
<i>tə'jo; 'tao</i>	chigger; louse	<i>sɪ'ti</i>	louse
<i>tɔj'wẽ</i>	one	<i>tei'hɛ</i>	—
<i>minũ</i>	fish	<i>mani'ni</i>	—
DJEOROMITXI			
<i>minõ</i>	fish	<i>mani'ni</i>	—
<i>tfuni</i>	little	<i>tfũ'hũi</i>	—
<i>kwāka</i>	head	<i>-kuti</i>	—(CL)

The Arikapu form *khə* 'hot', which is similar to the Kwaza verb *ke-* 'burn', was excluded for reasons explained in 6.1.1.1 and n. 18.

6.3.2. Wider vocabulary.

ARIKAPU	ENGLISH	KWAZA	
<i>bi'rə</i>	monkey	<i>hi'ri</i>	—
<i>ti'ti</i>	tucandeira ant	<i>tsi'le</i>	ant (various species)

DJEOROMITXI

<i>ø'ri</i>	howler monkey	<i>hi'ri</i>	monkey
<i>dədətʃi</i>	hard, swollen	<i>dodotʃi-'tə</i>	lit., rubber-ball
<i>tʃihi'hi</i>	tucandeira ant	<i>tsi'le</i>	ant (various species)

6.3.3. Grammatical elements.

ARIKAPU	ENGLISH	KWAZA	
<i>-nĩ</i>	needle, thorn	<i>-nĩ</i>	—(CL)
<i>nũ</i>	porridge, flour	<i>-nũ</i>	powder (CL)
<i>-mrẽ</i>	porridge	<i>-mẽ</i>	—(CL)

DJEOROMITXI

<i>mã</i>	porridge	<i>-mẽ</i>	—(CL)
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6.3.4. Sound symbolic words.

ARIKAPU	ENGLISH	KWAZA	
<i>ĩ</i>	sniff	<i>ĩ-</i>	—(v)
<i>kujku'ju</i>	bird species	<i>kuikui'jo</i>	screaming piha
<i>tʃuwe'we</i>	toucan	<i>sowĩ'wĩ</i>	—
<i>ku'taj, koko'rə</i>	cicada	<i>ku'ku</i>	—
<i>pu'pu</i>	owl	<i>buɓuɓudĩ-</i>	(owl is) calling (v)
<i>u'rĩ</i>	trupeiro bird	<i>iri'wa</i>	—
<i>khə'khə</i>	scream	<i>sĩsĩ-</i>	—(v)

DJEOROMITXI

<i>popo</i>	owl	<i>buɓuɓudĩ-</i>	(owl is) calling (v)
<i>ku'tʃi, krukru</i>	cicada	<i>ku'ku</i>	—

6.4. Tupi languages. The closest Tupi-speaking neighbors to Kwaza were probably Salamã (Tupi-Mondé),³³ Kepkiriwat, and Mekens (Tupi-Tupari). Galucio (2001:22) presents the phonological system of Mekens

³³ Salamã and Latundê (Northern Nambikwara) are probably the only tonal languages that were spoken in the vicinity of the Kwaza, as far as I know.

which has a series of five short oral vowels /i, i, e, o, a/ and an equivalent series of long oral, short nasal, and long nasal vowel phonemes. The consonant system includes 15 phonemes /p, t, k, kw, ʔ, b, g, s, r, m, n, ŋ, ŋw, w, j/. Like the other Tupi languages, Mekens is syntactically rather than morphologically complex, although it has both prefixes and suffixes. The prefixed person markers are characterized by an ergative distributional pattern. Basic word order is SOV.

No systematic comparison of Kwaza and Tupi was done for this study. The few distant formal similarities that were found between Kwaza and Tupi could be accidental and are probably not useful for an evaluation of possible genetic connections. Other similarities are so close that they must represent borrowings. Likely borrowings are given in 6.5. Apart from these, only a few items of the basic vocabulary from various Tupi languages show some similarity with Kwaza, e.g., AKU *gwaʔl*, KWA *haʔki(-dwa)* 'stone'; MEK *tak* 'daughter', KWA *-ʔtai* 'woman (CL)'; SAL *édi* 'mother', KWA *hiʔdi* 'sister' (for reasons explained in 6.1.1.1, the similar forms SIR *ekej* and KWA *ke-* 'burn' should not be included). In the wider vocabulary, only a few similar forms were encountered, such as SIR *dio(j)*, KWA *jo* 'manioc'; MEK *ewape*, KWA *kawaʔpe* 'cockroach'; MEK *tabit*, KWA *toʔwi* 'garden plot'; TUP *teʔju*, KWA *tai* 'lizard'; TUP *wahku*, KWA *hakoʔro* 'guan'. In addition to the grammatical intensifier discussed in 8.7, note also SIR *dutjua* 'village', KWA *-riʔtwa-* 'inhabited place (CL)', and these sound-symbolic forms: MEK *kwerew*, KWA *ðeʔre* 'thunder'; MEK *popoba* 'owl', KWA *ðuðuðuði-* '(owl is) calling'.

6.5. Widespread loanwords. Where similar forms in different languages are not cognates, they must be the result of borrowing or of coincidence. For the lists given above, it is sometimes hard to establish whether certain entries represent loanwords. There are, however, in addition to these lists, a number of forms in Kwaza that most likely do represent loanwords. This is because these forms are highly similar to more than one language in the Guaporé region. Some of these must have been borrowed together with the concept that they represent. It can nevertheless be difficult to determine which of the languages is the source and which is the target of a probable loanword. In the following Kwaza words, matchings occur in a wide range of unrelated languages of Rondônia with which there may have been (indirect) contact for many centuries. Note that this list does not include forms that represent likely borrowings between Kwaza and Kanoê or Aikanã only.

apaʔra 'banana': AIK *dipaʔra*; AKU *aʔpara*; MEK *apara*; TUP *aʔpara*.

Origin unknown, but note also Itonama (unclassified) *upatfa* (M. Crevels, p.c.) and Tiriyo (Carib) *paaruru* or *aparuru* (S. Meira, p.c.).

- akwa'mā* 'yam': MEK *akwa*; WAY *agwapo:d* 'big yam'.
- aratsa'ði* 'jacamim bird': AKU *aratapí*; KAN *arata'pí*; MEK *aratawí*. Possibly of Tupi origin.
- arikwã'jũ* one of the two mythological creators: MEK *arikwajõ* 'the Creator' (Galucio 2001:5); TUP *arkoanyó*, one of the primordial magicians (Casper 1975:189–94).
- a'si* 'house': LAT *sih*; Paresi (Arawak) *atí* (Roquette-Pinto 1950:340); Urupa (Chapakura) *afa* (Rondon and Faria 1948:205). This similarity may be a coincidence.
- atfi'tfi* 'maize': AKU *ati'ti*; ARI *tfi'tfi*; DJE *tfi'tfi*; KAN *ati'ti*; MAK *'atiti*; MEK *atsitsi*; TUP *a'ttiti*; WAY *ati'ti*. Even though Nordenskiöld (1915:372) lists *atití* (and *mupóy*) for AIK, present-day speakers deny this and use instead a different form: *ha'ki*. Note, however, Itonama (unclassified) *atfi* (M. Crevels, p.c.). In Porubora (Tupi) it is *fia* (D. Moore, p.c.). Maize was probably introduced in Amazonia about 5,000 years ago.
- de'da* 'anaconda': LAT *teh'tah-*; WAY *ndat* 'snake'.
- haku'ri* 'moon': ARI and DJE *ku'pa*; Leko (unclassified) *kureja* (S. van de Kerke, p.c.); MAK *u'ri*; MEK *pakuri*; WAY *paku'ri*.
- kuraku'ra* 'chicken': AIK *kura'ru*; AKU *kura'kura*; KAN *ku(ra)ku'ra*, *kuraku'ra*; MEK *korakora*; TUP *kura'kura*. According to Crevels (p.c.), similar forms are also encountered in many languages on the Bolivian side of the Guaporé, e.g., Itonama (unclassified) *kura'ka* (Crevels 2002b). This is probably a sound-symbolic word that was introduced recently together with the domestic animal it refers to. Note also Tiriyo (Carib) *kurairu* (S. Meira, p.c.).
- kuti'su* 'cujubim, jacutinga' (a white bird): Anunzé (Nambikwara) *kuidiçú* 'white' (Roquette-Pinto 1950:350).
- mãði* 'arrow/bow': AIK *pa'ʔi*; AKU *mam'bi*; ARI *mbu*; DJE *ku'bi*; KAN *ma'pi*; MEK *mampi*; Urupá (Chapakura) *mapip* (Rodrigues 1986:77).
- mau'ru* 'woodpecker': ARI *pāw'rū*; DJE *mī'oro*; WAY *māũ'rō*.
- nwã'rã* 'cudgel'; WAY *ngwari'a*. Unknown origin.
- outo're* 'bird (generic)': LAT *aw-(tah-)* '(certain birds)'.
- sui* 'marico bag': AIK *dy'i*; ARI *tfu*; DJE *du*; MAK *ε'tfi*.
- uri'rai* 'acará fish': ARI *u'rə* 'mudfish'; TUP *hari're*: 'mudfish'.
- wai-* 'good': Paresí (Arawak) *uaiê* (Roquette-Pinto 1950:339); Kitãulhu (Nambikwara) *wi-* (Kroeker 2001:44 and Lowe 1999:280).
- waruwa'ru* 'star': ARI *warəwarə*; Aymara *wara'wara* (W. F. H. Adelaar, p.c.); DJE *wi'rəwi'rə*; KAN *wariwa'ri*; MEK *waruwaru*; TUP and MAK *waruwaru*. This word may be symbolic of the flicker of stars. In KWA, the item is actually a specific form for 'morning star'. According to Hanke et al. (1958:205), it refers to 'Venus' in WAY.

wiri'ʔu 'assai': ARI *wi'ri*; MEK *kwiri*; TUP *witʔi*; WAY *gwiri*; MAK *wiri'tfa*. Since it occurs in various Tupi languages, this word may have spread from there to the others.

Certain words from this list, like *aratsa'bi* 'jacarim bird' and *wiri'ʔu* 'assai', may be of Tupi origin. Some words may have spread through Makurap, a Tupari language that functioned to a certain extent as a lingua franca in the early contact period in parts of Southern Rondônia.³⁴ Other words, such as *de'da* 'anaconda' and *sui* 'marico bag', are phonetically less similar to any language and may have spread much earlier. And some, such as *apa'ra* 'banana', *atfi'tfi* 'maize', *kuraku'ra* 'chicken', *mābi* 'arrow', and *waruwaru* 'star', may indicate an area of diffusion. They seem to derive from the same form (which is of unknown origin) and do not occur in many languages outside the Guaporé region.

Of the following Kwaza words, matchings are not only widespread in Rondônia but are also encountered in other parts of Amazonia with which direct recent contacts can be excluded. Some of these words may have spread through local or regional lingua francas such as Portuguese, which has adopted forms from Nheengatu, also called Língua Geral, a restructured language based on Tupinamba.³⁵

kuma'da 'bean': AIK *ku'māda*; KAN *kome'ta*; LAT *ka'mat*; Moré (Chapakura) *komat* (Angenot-de Lima 2002:440); Paresi (Arawak) *kumeta* (Becker-Donner 1955:322); Tariana (Arawak) *kumāda* (Aikhenvald 2001:400); Tiriyo (Carib) *kumata* (Meira 1999:752). Probably Tupi-Guarani, e.g., Tupinamba *koma'na* (Cunha 1989).

ka'nwā 'canoe': AIK *ka'nowa*. Probably from a Carib language via Portuguese e.g., Tiriyo (Carib) *kanawa* (Meira 1999).

mana'ri 'sieve': AIK *ma'nare*; ARI *mānā'rə*; KAN *mænæ're*; MEK *panane* (Becker-Donner 1955); SAB *mə'na:lə* (Araujo 2004:242); TUP *'mārā:re*; Lokono (Arawak) *manari* (van Baarle et al. 1989); Tiriyo (Carib) *manare*

³⁴ This becomes apparent throughout the accounts of Snethlage's travels in 1933–34, which also report on a Makurap-based contact language in use between Indians and non-Indians on the upper Rio Branco (Snethlage 1937:127 ff.). According to Caspar (1975:223), who lived in that region in 1948 and 1955, the different ethnic groups on the Rio Branco and Rio Colorado were traditionally multilingual, and Makurap was the dominant lingua franca.

³⁵ Etta Becker-Donner, who in 1954 visited two multi-ethnic reserves on the Madeira and Guaporé rivers in the west of Rondônia, where she met speakers of Aikanā, Kanoē, and various Tupi languages, writes that "Tupi" (i.e., Nheengatu) is not used there, and that "Even though in nearly all these languages Tupi words can be found, this influence is actually very limited" (1955:277) (my translation).

(Meira 1999:756). Possibly through Portuguese (note standard Portuguese *peneira*).

⁼*tẽ'su* 'hummingbird': LAT *su'nũn-*, [*tfu'nu*] (S. Telles, p.c., 2002b); Ninam (Yanomami) *tẽfo* (G. Goodwin Gómez, p.c.); Karajá and Javaé (Macro-Jê) *tõsõ* and *sõsõ* respectively (E. Ribeiro, p.c.); KAN *tsõjtsõj* 'small colibri species' (Bacelar 2004). This may be a symbolic word and not a borrowing.

⁼*suri'mjẽ* 'potato', *tfiri'mũ*, *tfuru'mũ* 'pumpkin': AIK *tfidĩmu* 'pumpkin'; SAL *zeri'mũ* 'pumpkin'. Probably from Portuguese (Tupinamba *juru'mũ* 'pumpkin' [Cunha 1989:179]). The ARI form *tfuri'mã* 'potato' is strikingly similar but should be explained independently as *tfu* 'cluster' and *ri'mã*, which is cognate with DJE *hẽ'mi* 'potato'.

ururi're 'basket': AIK *u'ruri*; KAN *urutfi*. Possibly from a Tupi-Guarani language such as SIR *irairu* (Schermaier 1958:135) or, via Portuguese, Tupinamba *uru* 'basket' (Cunha 1989:306).

uru'hu 'vulture': AIK *uru'pu*; KAN *uruku'tæ*; SAB *u'ru:p^ha* (Araújo 2004:251). Possibly from Portuguese (Tupinamba *uru'wu*). Note also Tiriyo and Wayana (Carib) *kurumu* (S. Meira, p.c.).

Some equally widespread grammatical elements such as the locative and applicative morphemes are discussed in 8 below.

6.6. Some approximate numbers. In the previous subsections I have listed lexical and grammatical items from a number of languages that correspond to segments in Kwaza. From a total of about 2,200 unique Kwaza items, I have encountered about 90 forms that are phonetically similar to forms in Aikanã, about 85 forms similar to forms in Kanoê, and about 55 forms similar to forms in Tupi languages. The number of shared forms between Kwaza and the Jabuti languages is about 30. Note that for many of the 2,200 Kwaza roots no equivalents were present in the documentation of other languages at my disposition. I had access to approximately 1,200 Aikanã roots, 1,200 Kanoê roots, 1,350 Jabuti roots, and maybe 600 Tupi roots. Note also that the relevant forms were not encountered during an exhaustive systematic search for similarities. Therefore, my corpus may contain a few more that have gone unnoticed so far, especially in the wider vocabulary. In table 3, the figures for the similarities are broken down according to the different subdivisions in the above lists. Table 3 shows, for example, that among a total (D) of 47 conspicuous similarities between Kwaza and Kanoê, 19 similarities are in Swadesh's basic 100-word list (A). In this respect, Kanoê is about as similar to Kwaza as Aikanã, which has 18 basic similarities. The Jabuti and Tupi languages are much less similar; and for the other languages of the region, so few items correspond with Kwaza

TABLE 3
COMPARATIVE FIGURES

	Total Number of Entries in Database	Similarities with Kwaza				Estimated Time Depth with Kwaza as Based on Swadesh's 100-Word List (A)
		A	B	C	D	
Kwaza	2,200					
Kanoê	1,200	19	20	8	47	55 centuries
Aikanã	1,200	18	20	8	46	57 centuries
Jabuti	1,350	7	7	3	17	88 centuries
Tupi	600	3	5	2	10	116 centuries

A = from Swadesh's 100-word list; B = from a wider vocabulary; C = grammatical elements; D = total number of similarities excluding borrowings and sound-symbolic forms.

that listing them as possible candidates for a distant genetic relationship seemed useless. Note that category A may include bound morphemes.

Even though some of the actual formal similarities between Kwaza, Aikanã, and Kanoê are striking, in historical-comparative terms none of the figures from table 3 points to close genetic relationships. In order to apply the comparative method in a serious manner, Kaufman (1990) specifies a number of requirements which the data referred to above do not meet. One of the requirements is that one have at least 300 potential cognates for a dependable phonological reconstruction (Kaufman 1990:18). Another requirement concerns lexical reconstruction: for the identification of a language family with a time depth of less than 5,000 years, one should be able to find at least 500 cognates in vocabularies of its member languages containing between 1,000 and 2,000 items (Kaufman 1990:19). Consequently, the lexical similarities of Kwaza are not sufficient for its classification.

The criteria for attesting long-distance relationships are much less stringent. Kaufman states one evaluation criterion for comparison thus: "If at least 50 lexical and 10 grammatical comparisons seem promising, further research may be undertaken" (1990:25). However, even under these conditions, the numbers of corresponding lexical and grammatical elements with Kanoê or Aikanã still do not justify such further research. The figures for other languages are lower still.

Table 3 also includes time depths estimated by applying Swadesh's glottochronological formula (as in Campbell 1998:179), on the basis of shared retentions in his basic 100-word list (see Appendix A below). I am aware of the unreliability of the lexicostatistic method for determining relatedness of languages and their time depths (e.g., Campbell 1998:177–86). Even if languages are unrelated, the formula produces a certain time depth just as if they were related. The calculations in table 3 therefore neither prove nor even imply that the languages listed are related to Kwaza. What I find

noteworthy is that these time-depth figures represent Kwaza as being more closely related to Kanoê or Aikanã than to any other language. As I show in the following sections, phonological comparison suggests that if Kwaza is related to any other language, that language is Kanoê rather than Aikanã or another language, in that order. Furthermore, the lexicostatistical calculations suggest that if Kwaza, Kanoê, and Aikanã are truly related, the time depth between them may fall within the “temporal ceiling of 7,000 to 8,000 years” (Kaufman 1990:23) for the comparative method.³⁶

6.6.1. Matching forms between Aikanã, Kanoê, and Kwaza. The number of formally and semantically corresponding items shared between the three unclassified languages Kwaza, Aikanã, and Kanoê, excluding sound-symbolic words, is about 22. It should be pointed out that the following is a maximal list. Not all forms are similar to the same degree, and the reader should feel free to reject certain proposed similarities.

KWAZA	AIKANÃ	KANOÊ	ENGLISH
<i>akũ'tũ</i>	<i>akũ'sũ</i>	<i>akũ'tsũ</i>	Indian ³⁷
<i>a'wĩ</i>	<i>a'wa</i>	<i>a'va</i>	parrot
<i>e-'kai</i>	<i>ka-døka</i> (lower leg)	<i>i-'kaw</i> (shinbone)	leg
<i>e-'ri</i>	<i>i:'ri</i>	<i>i-'ri</i>	liver
<i>e-'sĩi</i>	<i>ji, zi</i>	<i>jĩ</i>	hair
<i>e-te</i>	<i>ka-ta'pa</i>	<i>i-te'kwa</i>	belly
<i>ha'ki(-dwa)</i>	<i>ha'zi</i>	<i>a'ki</i>	stone
<i>ha'so</i>	<i>ha'zu</i>	<i>a'so/a'tso</i> (village)	hive
<i>hi</i>	<i>hi'ne</i>	<i>i-'nĩ</i>	fire
<i>hinũ'nã</i>	<i>ðũpapa</i>	<i>i-nĩ-tinũ</i>	ash
<i>kahe-</i>	<i>kaw-</i>	<i>ka-</i>	bite
<i>-mũ</i>	<i>-mũ</i>	<i>-mũ</i>	liquid (CL)
<i>-na</i>	<i>-ne</i>	<i>-nĩ</i>	LOC
<i>-nũ</i>	<i>-nũ</i>	<i>-tinũ</i>	powder (CL)
<i>pu'ra</i>	<i>tʃɛtʃɛpɛ'rjyo</i>	<i>pura</i> (cicada)	moth
<i>sĩ'ti</i>	<i>kij</i>	<i>tẽ'ki</i>	louse
<i>-ta-</i>	<i>-za-</i>	<i>-to-</i>	TRA
<i>te'rei</i>	<i>'tere</i>	<i>tæ'ræj</i>	pacu fish
<i>-te</i>	<i>-ðãw</i>	<i>-tæ</i>	round
<i>to'ro</i>	<i>tara</i>	<i>ta'ra</i>	annatto
<i>-tse</i>	<i>-te</i>	<i>-te</i>	(pronominal PL)
<i>tsũrũrũ'nĩ</i>	<i>hĩ'nũ'ʔnũ</i>	<i>ñũ'tfi</i>	sand

³⁶ However, possible time-depth figures no longer fall within such a ceiling if only those items that show the sound correspondences discussed in 7.1 and 7.2 are considered.

³⁷ In AIK and KWA, this word refers to indigenous groups with which no (friendly) relationships are maintained. The Kanoê of Omeré referred with this term to their Tupari-speaking neighbors, who have now become generally known by it.

Note that ten of the entries belong to Swadesh's basic word list and six are grammatical elements (of which one is included in the basic list). Note furthermore that the numbers of co-occurring lexical similarities in other combinations, such as Kwaza, Kanoê, and Jabuti or Aikanã, Kanoê, and Tupi, are much smaller, although more research is essential here. For now, these facts suggest that Aikanã, Kanoê, and Kwaza have more in common with one another than with other languages. The question is whether this is due to long-standing contact between speakers' communities of the three unclassified languages or to a genetic relationship between these languages.

7. Sound correspondences. Of course, it is doubtful whether Swadesh's basic list of core vocabulary is fully suitable for the requirements of linguistic comparison in the Amazonian biocultural context, but at present there are no widely accepted alternative calibrations. It may thus be useful to look at phonological and phonetic correspondences between items in the lists above. It turns out that there are regular sound correspondences only with Aikanã and Kanoê. They are, however, not very precise and there are at least as many exceptions as regularities.

7.1. Possible sound correspondences between Kanoê and Kwaza. Sound correspondences between Kanoê and Kwaza seem to be somewhat more concrete than between Aikanã and Kwaza, and there are more types and tokens. The most striking correspondence is between the Kanoê velar plosive [k] and certain alveolar consonants in Kwaza, namely, the alveolar plosives /t/ and /t/, and the lamino-alveolar affricate /ts/.

KAN [velar plosive] ~ KWA [alveolar plosive]

<i>i-'kẽj</i>	eye	<i>e-'tũĩ</i>	—
<i>i-ko'tso</i>	hand	<i>tso'je, -koje</i>	(N), (CL)
<i>-kete-</i>	EMPHATIC	<i>-tete-</i>	INTENS
<i>-ko</i>	fruit, seed	<i>-to, -ko</i>	(CL)
<i>kuta, i-ku'ta</i>	head	<i>tsu'tĩ, -kuti</i>	(N), (CL)
<i>tẽ'ki</i>	louse	<i>sĩ'tĩ</i>	—
<i>tĩj'ko</i>	flea, chigger	<i>sĩ'to</i>	chigger (sand flea)

Two cases show that there is also language-internal variation between velar and alveolar (affricate) plosives. The Kanoê element *kuta* 'head', which as an independent word requires the prefix *i-*, corresponds to the classifier *-kuti* 'head' in Kwaza, whereas the Kwaza independent equivalent is *tsu'tĩ* 'head'. The same alternation can be observed between the Kwaza noun and classifier for 'hand', *tso'je* and *-koje*, respectively. It is furthermore apparent that Kanoê has similar alternation between [k] and [t], between the noun and the

classifier for 'bamboo', *kɨ* and *-ti*, respectively. These correspondences could indicate a remote genetic relationship.

Another notable correspondence is between Kanoê voiceless plosive and Kwaza voiced implosive consonants.

KAN [voiceless plosive] ~ KWA [voiced implosive]

<i>arata'pɨ</i>	jacamim	<i>aratsa'ɓi</i>	—(widespread borrowing)
<i>kome'ta</i>	bean	<i>kuma'da</i>	—(widespread borrowing)
<i>ma'pi</i>	arrow	<i>mã'ɓi</i>	—(widespread borrowing)
<i>mĩ'to</i>	pariri fruit	<i>mĩ'do</i>	—(probable borrowing)
<i>tæ'mũ</i>	duck	<i>da'mũ</i>	—(probable borrowing)
<i>tõ'ki</i>	caterpillar	<i>da'kii</i>	—(probable borrowing)
<i>tome'ro</i>	wooden ladle	<i>duma'ru</i>	—(probable borrowing)

These examples show that this correspondence occurs both in borrowings that are widespread in the region and in native words that are probably the result of borrowing between the two languages. With regard to these latter items, Denny Moore (p.c.) hypothesizes that the direction may have been from Kwaza to Kanoê, since Kwaza also has a voiceless alveolar plosive /t/ (in, e.g., *te'rei* 'pacu fish'). Kwaza would likely have retained that sound when importing words from Kanoê, rather than changing it into a voiced implosive. Note that there are no voiced plosive consonant phonemes in Kwaza. Kanoê also lacks voiced plosive phonemes: its only voiced plosive is the [d], which is an allophone of /r/, whereas there is an implosive [ɓ] as allophone of /p/. Note that in Aikanã the preferred allophones of /b/ and /d/ are slightly implosive.

There are a number of Kanoê items that begin with a phonetic glottal closure where Kwaza has an /h/. Consider the following examples:

KAN [initial glottal] ~ KWA [h]

<i>a'ki</i>	stone	<i>ha'ki(-dwa)</i>	—
<i>i-'nĩ</i>	fire	<i>hi</i>	—
<i>i'ri</i>	capuchin monkey	<i>hi'ri</i>	—
<i>ĩ'ro</i>	woolly monkey	<i>hĩriko'ro</i>	—
<i>o'mũ</i>	rubber milk/latex	<i>hu'mũ</i>	—(probable borrowing)

There are also some examples of a possible correspondence between Kanoê plosive and Kwaza fricative consonants:

KAN [plosive] ~ KWA [fricative]

<i>akiki-</i>	scream	<i>sịsị-</i>	—(v)
<i>kore'nũ</i>	tayra	<i>hu're</i>	—

<i>kwinike'te</i>	traíra fish	<i>sunũ'te</i>	—
<i>tẽ'ki</i>	louse	<i>sĩ'ti</i>	—
<i>tij'ko</i>	chigger, flea	<i>sii'to</i>	chigger (sand flea)
<i>uruku'te</i>	vulture	<i>uru'hu</i>	—(widespread borrowing)

With respect to vowels, there are some instances of Kanoê open [a], [ɛ], and [e] corresponding to Kwaza closed [i] or [ĩ].

KAN [open] ~ KWA [closed]

<i>dwa-</i>	break	<i>dwi-</i>	—(v)
<i>i-ku'ta, kuta</i>	head	<i>tsu'ti, -kuti</i>	(N), (CL)
<i>mænæ're</i>	sieve	<i>mana'ri</i>	—(widespread borrowing)
<i>nã'ke</i>	female	<i>jã'ki</i>	sister

In addition to correspondences between different sounds, there are a number of correspondences between similar sounds. Most of these are identical and consistent with the word lists in 6.1, which were selected on the basis of chance resemblances. However, they are not always predictable. For example, Kanoê [a] corresponds to Kwaza [a] in many forms, but there are also correspondences with [ĩ] 'head', [o] 'ball', [e] 'shell'. Kanoê [æ] corresponds with Kwaza [e] ~ [ɛ] in a number of forms, such as 'husband', 'round', 'rain', 'pacu fish', and 'wild pig', but not in 'duck'. And Kanoê [o] corresponds to Kwaza [u] in 'tayra', 'pupunha', 'rubber milk', 'wooden ladle', but not in 'hand', 'foot', 'seed', 'black', 'papaya', 'caterpillar', and others. These correspondences are not systematic and do not provide evidence of a genetic relationship.

7.2. Possible sound correspondences between Aikanã and Kwaza.

There are a number of items in Aikanã that contain a fricative consonant whereas the Kwaza equivalents contain a plosive consonant in the same position. Consider the correspondences between Aikanã [ð], [z] and Kwaza /t/ and between Aikanã [ʒ] and Kwaza /k/ in the following cases:

AIK [fricative] ~ KWA [plosive]

<i>-ðãw</i>	round	<i>-te</i>	—
<i>ha'zi</i>	stone	<i>ha'ki(-dwa)</i>	—
<i>-za-</i>	TRANSITIVIZER	<i>-ta-</i>	—

However, the reverse is also attested. Note the following examples where Aikanã [k] is represented by /t/, or maybe /s/ or /ts/, in Kwaza, and where Aikanã has [d] in positions where Kwaza has /s/:

AIK [(im)plosive] ~ KWA [(af)fricative]

'(h)ãdy	porcupine	a'su	—
dyi	marico bag	sui	—(widespread borrowing)
kij	louse	st'tii	—

With regard to the vowels, only some vague tendencies can be observed. Aikanã may have a front vowel [y], [ø], or [i] where Kwaza has a back vowel /u/, /ũ/, or /o/:

AIK [front] ~ KWA [back]

'(h)ãdy	porcupine	a'su	—
ary'mε	tapir	ã'rũi	—
birywĩ	bird species	ɓjuru'tε	—
dyi	marico bag	sui	—(widespread borrowing)
hadø'rø	coati	hadu'ru	—(probable borrowing)
ha'rø	armadillo	haru'rai	—(probable borrowing)
ka-rε'mũ	knee	e-ro'mũ	upper and lower thigh
pi'ratfy'ri	Pseudomyrma	so'ro	—
tʃɛtʃɛpε'rjyo	moth	pura	—

There are also a few corresponding items in which Aikanã has an open vowel [a], [ε], or [e] in the same position where Kwaza had a closed vowel [y]:

AIK [open] ~ KWA [closed]

a'wa	parrot	a'wĩ	—(probable borrowing)
awã-	sleep	wãwãi-	—(v)
durεrε-	roll	duriri-	—(v)
ma'nare	sieve	mana'ri	—(widespread borrowing)
ta'ra	annatto	to'ro	—(probable borrowing)
'waru	wheel	wiruni'te	mill, pestle

In addition to correspondences between different sounds in the same position, there are a number of correspondences between similar sounds in the same position. For example, Aikanã [a] corresponds to Kwaza [a] in many forms, but there are also correspondences with [i] 'wheel', [o] 'annatto', [e] 'cacau', and [u] 'kingfisher'. However, as with Kanoê, these correspondences are not systematic and should not be considered as evidence of a genetic relationship.

8. Morphosyntactic similarities. Although 95% of the vocabularies of the unclassified languages of Rondônia are totally different, the languages are structurally quite similar. They are (poly)synthetic languages. Their morphology is mainly suffixing. They all have quite elaborate classifier systems and verbal cross-reference systems with similar morpheme positions.³⁸ And they share a number of formally identical grammatical morphemes. A number of these traits are shared with other language families of the Guaporé region and might determine the boundaries of a linguistic area. Other traits may be restricted to Aikanã, Kanoê, and Kwaza only and may either be the result of intensive language contact or even relexification, or they may point to distant genetic relationships. In the following sections, these structural similarities are presented.

8.1. Classifier systems. Over the past decades, various scholars have noted the wide range of forms, meanings, and distributions that classifiers often have in Amazonian languages. Payne (1987) suggests that the shared characteristics of classifier systems in a number of Western Amazonian languages point to language contact. Classifiers are of considerable importance in several Maipuran Arawak (Aikhenvald 1999 and Facundes 2000; p.c.), Macro-Carib, and Macro-Tucano languages (Derbyshire and Payne 1990), as well as in the Yanomami languages (Goodwin Gómez 2000), the Bora language Miraña of Colombia (Seifart 2002), and in several languages of Bolivia, such as the unclassified Movima language (Grinevald 2002) and the Tacana language Cavineña (Guillaume 2004). Although not widespread in the Tupi family, classifier systems are also of importance in Karo (Gabas 1999) and Mundurucu (Gonçalves 1987; see also Rodrigues 1999). Classifier systems are of importance in Nambikwara languages too (Telles 2002a and Araujo 2004), although they involve a relatively small number of classifying morphemes. The Jabuti languages do not have classifier systems, but a very small set of elements is both formally and functionally similar to certain classifiers of other languages.

The Kwaza classifier system has many properties that are characteristic of Amazonian languages. Kwaza has numerous classifiers (over 100), many of which have a rather specific semantic content that other languages would express using independent lexemes. The distribution of Kwaza classifiers includes possessive, numeral, attributive, and demonstrative nominal constructions. They can furthermore be attached as nominalizers to verbs and adverbs, and they may be incorporated into verbs and refer to one of the

³⁸ Note, however, the observations in 6.1 and 6.2. The person-marking systems of both Aikanã and Kanoê involve person prefixes in addition to person suffixes, and different forms and distributions for different classes of verbs. In this respect, Kwaza stands out as much simpler.

arguments. It appears that Aikanã and Kanoê have classifier systems similar to that of Kwaza.

There are both structural and formal similarities between the Aikanã, Kanoê, and Kwaza classifier systems. The Kwaza classifier *-ko* 'seed, fruit' is identical to its Kanoê equivalent (from Bacelar 2004).

- (1) Kwaza *u'ru* *'wã-dĩ-ko-'ra*
 patua cook-CAU-CL:fruit-IMP
 'cook the patua seeds!'
- (2) Kanoê *ope'ko* *wo'ro-ko-e-re*
 kernel black-CL:fruit-DEC-AUX
 'the seed is black'

Also, Kwaza *-su* 'bone', as in *kẽwẽ-'su* 'turtle bone', is quite similar to Aikanã *-zu* in *kiripatsa-zu* 'turtle bone'. Some forms are shared by the three languages, like *-nũ* 'powder', as in, e.g., Kanoê *mapi-ti'nũ* 'gunpowder' (lit., 'arrow-powder') and *-mũ* 'liquid', as in the following examples:

- (3) Kwaza *kawe-'mũ* *hoho-ĩ-'mũ-ki*
 coffee-CL:liquid black-ATT-CL:liquid-DEC
 'the coffee is black'
- (4) Aikanã *ka'pɛ(-mũ)* *'vi-mũ-'ẽ*
 coffee(-CL:liquid) black-CL:liquid-DEC
 'the coffee is black'
- (5) Kanoê *'opeko-'mũ* *wo'ro-mũ-e-re*
 kernel-CL:liquid black-CL:liquid-DEC-AUX
 'the coffee is black'³⁹

Note that this rare set of examples is not meant to suggest that the three languages are relexified variants of one language. Even though the examples are grammatically nearly identical, there are also differences between the classifier systems in these languages which are masked by the forms above. Moreover, of the more than 100 different classifiers in Kwaza, there are only a few that have identical forms in other languages. These forms have probably spread over the region through areal diffusion. Table 4 lists all the at-

³⁹ The KAN form *kopekomũ* 'coffee' is attested as an alternative form of *opekomũ* (L. Bacelar, p.c.).

TABLE 4
SIMILAR CLASSIFIERS IN DIFFERENT LANGUAGES OF THE GUAPORÉ REGION

	‘bark’	‘fruit’	‘bone’	‘tooth’	‘liquid’	‘round’	‘thorn’	‘porridge’	‘powder’
KWA	<i>-kalo</i>	<i>-ko</i>	<i>-su</i> =	<i>-māi</i>	<i>-mũ</i>	<i>-tɛ</i>	<i>-nĩ</i>	<i>-mẽ</i>	<i>-nũ</i>
KAN		<i>-ko</i>			<i>-mũ</i>	<i>-tæ</i>			<i>-nũ</i>
AIK			<i>-zu</i>	<i>-mũj</i>	<i>-mũ</i>	<i>-ðãw</i>			<i>-nũ</i>
ARI							<i>-nĩ</i>	<i>-mrẽ</i>	<i>-nũ</i>
NAM	<i>-kalo</i>		<i>-su</i> ³						<i>-nũx</i> ³
LAT	<i>-kaloh</i>								<i>-nũ</i>
SAB			(<i>-su</i>)						<i>-inun</i>

tested formal similarities between classifiers in the languages discussed in this article.⁴⁰

8.2. Semantically empty root. There is a semantically empty root *e-* in Kwaza. It is used as a noun formative to lend independent status to classifiers. It occurs often in words which denote things or beings which are part of something. However, there is no systematic contrast between alienable and inalienable possession involving the respective absence or presence of the prefix *e-*.⁴¹ The empty root strongly resembles the Kanoê element *i-*, in form, function, and distribution.⁴² The following examples show the similarity in structure:

(7) Kwaza *e-’kai*
 \emptyset -CL:leg
 ‘(its) lower leg’

Kanoê *i-kaw*
 \emptyset -CL:shinbone
 ‘(its) shinbone’

⁴⁰ Note, however, that the Kwaza classifier inventory forms the point of departure in table 4. To find similarities between Guaporé languages excluding Kwaza requires more research. Furthermore, the semantic value of the above classifiers may have a wider range or greater complexity than their English representations suggest. For example, the prototypical meaning of Kwaza *-kalo* relates to a hollow oblong shape like that of a pineapple or sansevieria leaf, whereas Latundê *-kaloh* refers to tree bark and flat objects in general. By the way, the 3 in the Nambikwara forms in table 4 indicates low tone.

⁴¹ Even if the empty root had its origin in inalienability phenomena, as attested in Tupi languages (e.g., Gavião in Moore 1984:146–52 and Mekens in Galucio 2001:32–33), no such distinction is found in the grammar of Kwaza today.

⁴² Like in Kwaza, this element, which is referred to as “neutral root” in Bacelar (2004), occurs mainly with inalienable items. Nevertheless, there are also alienable items where it occurs and inalienable items where it does not occur.

The classifiers in both these examples are productive and can occur without the empty root in various positions inside nouns and verbs, but never as independent words by themselves.

A practically identical root *ĩ*- is mentioned for Latundê (Northern Nambikwara) in Telles (2002a:96), where it is analyzed as a semantically empty root that lends independent nominal status to bound classifier morphemes. The zero root is also strikingly similar in form and use to the prefix *e*- in Tacana languages, such as in Ese Eja (Chavarría 2000) and Cavineña (Guillaume 2004), where it occurs in the same position with the same function. The empty root may be an areal trait. It is absent, however, in Aikanã.

8.3. Pronominal plural. The lack of a grammaticalized distinction of nominal singular and plural number marking seems to be a characteristic of many Amazonian languages. This is also the case in the Guaporé region. The unclassified languages of Rondônia, like certain Bolivian languages, some Nambikwara languages, and some of the Tupi languages, have no clear nominal number marking. There do seem to be relics of the distinction in pronominal systems, however. In the following chart, the first- and second-person pronouns of Kwaza, Kanoê, and Aikanã are listed:

KWAZA	KANOÊ	AIKANÃ	
<i>si</i>	<i>aj</i>	<i>(hi')sa</i>	'I'
<i>tsi'tsɛ</i>	<i>aj'te</i>	<i>sa'tɛ</i>	'we'
<i>s̃i</i>	<i>mĩ</i>	<i>hĩ'da</i>	'you'
<i>s̃i'tsɛ</i>	<i>mĩ'te</i>	<i>hĩ'da'za</i>	'you (PL)'

Although the pronouns in these languages do not resemble one another, the Kanoê plural morpheme *-te* strongly resembles the Kwaza element *tsɛ*. In Aikanã, only the first-person plural seems to contain the same historical plural marker *-te* as in Kanoê.

A difference between Kwaza and the two other unclassified languages is that only Kwaza makes a distinction between inclusive and exclusive 'we'. This distinction is common in Tupi languages. It is uncertain, however, whether the Kwaza inclusive pronoun *tʃa'na*, also realized as [tʃa'na], could originate from a Tupi language (the first-person inclusive has been reconstructed in Proto-Tupi-Guarani as **jané* by Jensen 1998).

8.4. Locative case. Another feature of Kwaza that may be the result of areal diffusion is the locative case suffix. The Kwaza locative suffix *-na* is attached to nouns and bears both formal structural and semantic resemblance to Aikanã *-ne*, Kanoê *-nĩ*, and Latundê *-naw*, which are also (par-

tially) locative suffixes.⁴³ Here are examples from the three unclassified languages.

- (8) Kwaza *itso-na*
 hammock-LOC
 ‘in the hammock’
- Aikanã *hutu-ne*
 rubber-LOC
 ‘in the latex grove’
- Kanoê *tij-nĩ*
 house-LOC
 ‘in the house’

Note that the value of the “locative” element *-nĩ* in Kanoê also includes instrumental and comitative senses, and it is therefore better analyzed as an “oblique” marker (Bacelar 2004). Aikanã has two suffixes that have locative function: *-ete*, which can also be used to express comitative, and *-ne*, which often has an instrumental value. In Kwaza, the instrumental marker *-ko* can also be used with a cislocative sense.

8.5. Verbal directional morphemes. Payne (1990:223) mentions the existence of directional morphemes as a Northwest Amazonian areal trait and includes the Bolivian unclassified language Cayuvava. Kwaza has nearly 50 different verbal directional suffixes, some of which express very specific meanings such as ‘movement in a circle’, ‘into fire’, ‘behind the house’, ‘activity in the morning’.

Like Kwaza, Aikanã also has a rich collection of directionals (I. Vasconcelos, p.c.). One verbal morpheme, *-ne* ‘at night’, deserves mention here. With respect to its meaning and distribution it resembles the highly specific Kwaza time-of-day directionals *-sile* ‘at night’ and *-kore* ‘in the morning’.

Kanoê does not have more than five directionals, all with a rather basic meaning. Some of the forms, e.g., *-to* ‘inward’ and *-ja* ‘downward’, bear resemblance to Kwaza, respectively *-tote* ‘upward’ and *-ja* ‘thither’, but their meanings are quite different.

⁴³ But it can also be coincidence. Aymara has a locative marker *na* (W. Adelaar, p.c.), and S. Meira (p.c.) has pointed out that similar forms with a locative function are also encountered in languages outside the Americas, e.g., in Portuguese and Russian.

8.6. Applicative. A particularly widespread Western Amazonian feature mentioned in Payne (1990) concerns verbal applicative morphemes that turn oblique satellites into core arguments. Wise (2002) shows that a number of unrelated Peruvian Amazonian languages, such as Arabela and Iquito (Zaparo), Chayahuita (Cahuapana), and Yagua (Peba-Yagua), share applicative suffixes of the form *-ta* or *-tia*. She questions whether this could be a North-western Amazonian areal feature only, since it is not a characteristic of Pano languages.

It turns out that languages in Southwestern Amazonia seem to have similar morphemes. Kwaza has two important transitivizing morphemes, *-ta-* and *-tja-*, that may raise comitative, recipient, and other satellites to argument status. Other languages of the Guaporé region have formally and functionally similar elements, such as the Aikanã “transitivizer/classifier” *-za-* (Vasconcelos 2003), the Kanoê “transitivizer/classifier” *-ta-* or *-to-* (Bacelar 2004), the Karo (Tupi-Ramarama) comitative/causative *-ta-* (Gabas 1999:83–86), the Mosetén (unclassified) applicative *-tya-* or *-te-* (Sakel 2004), and possibly others. In Latundê, there is an applicative morpheme *-ka-* (Telles 2002a:317–23).

8.7. Intensifier. Kwaza has an intensifying morpheme *-tete* that can be applied to nouns with the sense of ‘real’, e.g., *kanwa-tete* ‘real canoe’. When applied to adverbs, it usually has the form *-te-* and has an intensifying function. On verbs, it occurs sometimes as *-te-*, but the reduplicated form is common. Consider:

- (9) Kwaza *kukui-te'te-ki*
 hurt-INTENS-DEC
 ‘it hurts a lot’

The morpheme resembles Kanoê *-kete-*, as in:⁴⁴

- (10) Kanoê *aj* *'opeko-'mũ* *i'memuro-ke'te-re*
 I kernel-CL:liquid like-really-DEC
 ‘I like coffee very much’

The morpheme is also similar to a focus/emphatic morpheme in the Tupi languages, e.g., *ete* in Tupinamba (Cunha 1989), *te* in Sirionó (Schermaier 1958), *-te(te)* in Mekens (Galucio 2001), and *tere* ‘really’ and *téét* ‘exactly’ in Gavião (D. Moore, p.c.).

8.8. Alternative third-person possessive. Many languages in the Guaporé region lack special possessive pronouns or inflections. Kwaza is no ex-

⁴⁴ This example is from L. Bacelar (p.c.).

ception and differs in this respect from Aikanã and Kanoê. Aikanã has an incomplete paradigm of possessive pronouns and a full paradigm of inflections that can be attached to nouns to indicate possessor or to verbs to indicate beneficiary object. Kanoê has a full paradigm of possessive pronouns.

The standard way to express possession in Kwaza is a relatively analytic construction, involving the derivational possessive suffix *-dĩ-* with a nominalizer, attached to the dependent possessor. Similar constructions also exist in Kanoê, involving the morpheme *-o*, and in Aikanã, where the possessive morpheme *-dũ* is somewhat similar to Kwaza *-dy*. Consider the following:⁴⁵

- | | | |
|------------|---|-------------------------|
| (11) Kwaza | <i>a'ha-dĩ-hĩ</i>
father-POS-NOM
'father's hammock' | <i>i'tso</i>
hammock |
| Aikanã | <i>baba-dũ</i>
father-POS
'father's hammock' | <i>da'ra</i>
hammock |
| Kanoê | <i>mapi-o</i>
arrow-POS
'the blade of the arrow' | <i>kĩtso</i>
blade |

In addition to the above, Kwaza has an irregular possessive construction, involving the suffix *-tjate*, that may be attached to the possessum. This latter morpheme does not belong to any paradigm and refers exclusively to a third-person possessor. Aikanã is the only language of the region that has a similar extraparadigmatic third-person possessive suffix, *-deri*, which is also attached to the possessum. Note the following:⁴⁶

- | | |
|------------|---|
| (12) Kwaza | <i>e'tai-tjate</i>
woman-3.POS
'his wife' |
| Aikanã | <i>de'tja-deri</i>
woman-3.POS
'his wife' |

In both Aikanã and Kwaza, 'your wife', for example, would be expressed in ways that differ considerably from each other and from (12) above. In

⁴⁵ The construction could also be called genitive. The KAN example is from Bacelar (2004:136).

⁴⁶ The AIK example is from Peterson (1993).

fact, the grammars of Aikanã and Kwaza are quite different, with only a few systematic similarities, such as in the classifier systems. The alternative non-paradigmatic third-person possessor morpheme is clearly a shared irregularity on the structural level; nothing similar is found in the other languages of the region.⁴⁷ It is also possible that the forms involved are cognate.

9. A preliminary evaluation. In her preliminary comparison of Kanoê, Aikanã, and a number of Tupi and other languages, Becker-Donner (1955:320–27) noticed a relatively high number of similar forms between Aikanã and Kanoê especially. Price (1972:81) even suggested that this points to creolization processes in the history of these languages. The present comparison would include Kwaza in the relatively close relationships that Becker-Donner suspects may hold between Kanoê and Aikanã. A question remains, however, whether such assumed relationships have a basis in genealogical reality.

The present tentative comparison of Kwaza with other languages does not provide enough evidence for a definite genetic–historical relationship. Nevertheless, the similarities between Kwaza, Aikanã, and Kanoê are at least suggestive. In particular, the number (19) of similar items in the basic vocabularies of Kanoê and Kwaza is perhaps significant and could point to a distant genetic relationship. The distance with Aikanã, as suggested by 18 shared basic words, is similar. The distance with Tupi and with Jabuti is probably beyond the time depth that can be estimated using historical–comparative techniques. If ever there was a genetic connection there, this cannot be proved by the historical–comparative method.

Some of the nonidentical sound correspondences between Kanoê and Kwaza are conspicuous, whereas the sound correspondences between Aikanã and Kwaza are less clear. The lexical similarities between certain basic items that do comply with a somewhat regular pattern of sound change may point to a long-range genetic relationship. With regard to Tupi, Jabuti, or other languages, no regular nonidentical sound correspondences with Kwaza were attested at all. It seems likely that nearly identical lexical pairs are either recent loans or the result of long-standing contact. Notice, in this respect, that many of these clear lexical borrowings are words for animals, implements, and domesticated plants, which is also of importance for the reconstruction of the prehistory of the region.

Although the majority of the grammatical similarities are probably the result of diffusion, or maybe language intertwining or convergence, there are

⁴⁷ Latundê has a full paradigm of possessive prefixes which are attached to the possessum. Note that its third-person possessive prefix (*a-*) has a wider distribution than the others (Telles 2002a:194–95).

some shared idiosyncrasies that may call for a genetic explanation. At least two specific features, namely, the pronominal plural form $-t(s)\varepsilon$ and the alternative third-person possessive, seem to be restricted to the unclassified languages. Combined with the lexical similarities and phonological correspondences, these characteristics suggest the possibility of a long-distance genetic relationship between Kwaza and Kanoê and between Kwaza and Aikanã. In addition, Aikanã and Kanoê share certain possibly related forms and some specific typological characteristics, such as the co-occurrence of prefixed and suffixed person markers.

At this point, similarities with other languages seem to be due to diffusion or to chance. However, future systematic comparison of the languages of Bolivia and Rondônia may change our idea of the actual genetic relationships. So far, Kwaza is at best a member of a small family with two or three languages, without visible connections to larger linguistic units, although its shared characteristics with Kanoê and Aikanã might alternatively be explained by diffusion. My preliminary impression about the Guaporé region is that speakers of the languages under discussion have been in contact with one another for many centuries, leading to the emergence of a *Sprachbund*. The widespread similarity of both the forms and the structures of the classifier systems, the empty root, and the applicative suggest this. Nevertheless, for a useful evaluation of the nature of the linguistic relationships, be they genetic or contact-induced, much more comparative research is needed, involving detailed study of Chapakura and Pano languages and the languages of the Bolivian lowland.

Furthermore, investigation of the social and historical background of all groups in the Guaporé region is essential for establishing the validity of any claim with regard to linguistic relationships. Bakker (2000) has shown that without knowledge of social and historical contexts, it is, in principle, impossible to decide whether two languages split apart two or two thousand years ago. In times of great social and cultural upheaval, languages can go through rapid grammatical, lexical, and phonological changes, especially when speech communities are small. Intertwined ("mixed") languages, such as Island Carib, can emerge in one generation; lexical taboos, as in East Greenlandic, can take effect suddenly; and deliberate changes that lead to cryptolects, like the French slang *Verlan*, can take place in one day. In such cases, linguistic data alone are not enough to establish a definitive time depth. Given the fact that the archaeology, indigenous cultures, and oral history of the Guaporé region are perhaps even less well documented and more threatened with extinction than the indigenous languages, the urgency of their study is hard to overstate. Only when more adequate documentation has become available can we start to fill in the pieces of this complex puzzle.

APPENDIX A
SWADESH BASIC VOCABULARY FOR THE UNCLASSIFIED
LANGUAGES OF RONDÔNIA
(Laércio Bacelar, Ione Vasconcelos, and Hein van der Voort)

The following list contains the full Swadesh basic vocabulary of 100 words (as in Bynon 1983:268) in Aikanã, Kanoê, and Kwaza. All of the Kwaza items and most of the Aikanã items are from my field notes. A number of Aikanã items are from Vasconcelos (2003; p.c.), Carlson (1984), Becker-Donner (1955), and Hanke (1956), and some may not be fully analyzed. The Kanoê items and their analysis are from fieldwork by Laércio Bacelar. Forms that start, and sometimes end, with a hyphen are affixes. Forms that end in a hyphen are verb roots or stems. The element *ka-* in the Aikanã forms represents a body-part prefix, whereas Kanoê *i-* and Kwaza *e-* represent a semantically empty root. Forms that neither start nor end with hyphens are independent words, usually nouns.

ENGLISH	AIKANÃ	KANOÊ	KWAZA
1. I	(hi)'sa	aj	si
2. you	hĩ'ða	mi	sĩĩ
3. we	sa'te	ajte	sĩ'tse (EXCL)
4. this	hiba	jũ	ĩ-
5. that	'kari	ũ'ko	ai-
6. who	bari	nuvi-	dĩ'le
7. what	tara'i (what thing)	naj	tsu'hũ
8. not	hĩna	-k-, tsokere	-he-, 'hĩʔĩ
9. all	amai	ara-k- ⁴⁸	dũ-
10. many	ta(ð)aka	ara-k-	to-
11. one	amɛmɛ	pja	ĩei-
12. two	atuka	mow	aki-
13. big	tja'bĩj	-tsi, ej-	tĩi-
14. long	ũ'pe	ã-	unã-
15. small	(i)sĩ'ẽ, -mĩj	tsĩni-, -(tsĩ)kwa	tĩuhũi(-), e-to'hoi
16. woman	dɛ'tja	e ⁴⁹	e-'tai
17. man	kurɛ'ða	æ'wo	tswa, e-'swa (husband)
18. person	za're (Aikanã)	ite'wæ	mãĩĩri'tsa
19. fish	ãti	kwi'nĩ	mani'ni
20. bird	pjama'mĩj	õkwa	outo('re) ⁵⁰

⁴⁸ Same form as for 'many', literally 'not few', in which *-k-* is the negative element.

⁴⁹ This word usually means 'wife'. The KAN noun *nã'ke* 'woman' is also used as a feminine suffix. It may be related to KWA *jã'ki* 'younger sister of male', and perhaps also to AIK *jaja* 'older sister'. In AIK and KWA, the words for 'woman' also cover the sense 'wife'. Note LAT *tẽh-te* 'woman' (lit., 'woman-REFERENTIAL').

⁵⁰ The otherwise unproductive element *-re* causes the generic term *outo* to refer to birds of a relatively small size. It may derive from the fossilized Kanoê classifier *-re* that occurs in various Kanoê bird names (Bacelar 2004:131–33).

21. dog	<i>ā'rjya</i>	<i>ope'ra</i>	<i>jere'swa</i>
22. louse	<i>kij</i>	<i>tē'kī</i> ⁵¹	<i>sī'tī</i>
23. tree, wood	<i>wε</i>	<i>i'tse</i>	<i>īwī'nwā</i>
24. seed	<i>-ḍāw, dy</i> ⁵²	<i>te'kwa</i>	<i>e-'to, e-'sī</i> ⁵³
25. leaf	<i>wijdi'zi</i>	<i>æj</i>	<i>hetsi-'se</i> ⁵⁴
26. root	<i>ḍā'pi</i>	<i>i-ka'tsi</i>	<i>e-(kā)jā</i>
27. bark	<i>εdu'du</i>	<i>kje'te</i>	<i>e-si'ki, e-'ka</i>
28. skin	<i>εdu'du</i>	<i>i-'ta</i>	<i>e-si'ki</i>
29. flesh	<i>jē, nē</i>	<i>i-'rāw</i>	<i>au, -ī</i>
30. blood	<i>ī</i>	<i>īku'nī</i>	<i>jā</i>
31. bone	<i>(-)zu</i>	<i>i-u'tā</i>	<i>tsu, -su</i>
32. grease	<i>ḍāj'ri</i>	<i>tfue're</i>	<i>kēi'mū</i>
33. egg	<i>-ḍumj</i> ⁵⁵	<i>i-'ñāj</i>	<i>e-'ni</i>
34. horn	<i>kij'dε</i>	<i>i-'kwā</i>	<i>e-'ke (horn, cob)</i>
35. tail	<i>wīj'di</i>	<i>tso'nū</i>	<i>e-si'nū</i>
36. feather	<i>ji, zi</i>	<i>tsa'kæj, i-te-'tsi</i>	<i>e-sii'to</i>
37. hair	<i>ji, zi</i>	<i>jī</i>	<i>e-'sī</i>
38. head	<i>tinū'pa</i>	<i>i-ku'ta, kuta</i>	<i>tsu'ti</i>
39. ear	<i>ka-nīḍū</i>	<i>i-teñu</i>	<i>nā'si</i>
40. eye	<i>ka-mu'ka</i>	<i>i-'kāj</i>	<i>e-'tūi</i>
41. nose	<i>ka-nā'wā</i>	<i>i-ka'nū</i>	<i>tse'ni</i>
42. mouth	<i>ka-'wa</i>	<i>i-'a</i>	<i>e-'kāi</i>
43. tooth	<i>mūj</i>	<i>i'pe</i> ⁵⁶	<i>mī'ki, -māi</i>
44. tongue	<i>wa'ru</i>	<i>i-'taw</i>	<i>tu'ku</i>
45. claw (nail)	<i>iri'dij</i>	<i>pi'ko</i>	<i>īswā'sī</i>
46. foot	<i>ka-re'tsa</i>	<i>i-tso'tsi</i>	<i>to'ha</i>
47. knee	<i>ka-re'mū</i>	<i>i-roko</i>	<i>e-'sī</i> ⁵⁷
48. hand	<i>i:'ne</i>	<i>i-ko'tso</i>	<i>tso'je</i>
49. belly	<i>ka-ta'pa</i>	<i>i-te'kwa</i>	<i>e-'te</i> ⁵⁸
50. neck	<i>nē'nū, ka-nū'ja</i>	<i>i-'twa</i>	<i>e-ko'ko</i> ⁵⁹
51. breasts	<i>tføtfy'ī</i>	<i>nu</i>	<i>tē'rē</i>

⁵¹ The KAN form *tij'ko* means 'chigger'; AIK *hakø'nāj*, Kwaza *sii'to*.

⁵² The element *-ḍāw* is a classifier for round things. The word *dy* also means 'earth'. Becker-Donner has *àlú*.

⁵³ See also n. 11 above.

⁵⁴ The KWA element *-se* 'leaf' is a classifier.

⁵⁵ This element can be further segmented as the possessive element *-ḍu-* and the diminutive element *-māj*.

⁵⁶ In Kanoê, the element *-māi* may occur lexicalized in *tse'māi* 'piranha'.

⁵⁷ The KWA form *e-'romū* 'upper and lower thigh' may be related to the AIK form; KAN *i-te'tse* 'thigh, leg'.

⁵⁸ The syllables *-te-* in KAN and *-ta-* in AIK could be related to the KWA classifier *-te* 'round'.

⁵⁹ The KWA form also covers the meaning 'throat', which is *ka-ekawa* in AIK; in KAN, *i-tokī'twa* 'throat', *i-peko'tso* 'back of neck'.

52. heart	<i>tik^hik^hy'ʔi</i>	<i>ĩ-kũ'kwa</i>	<i>e-ri'to</i>
53. liver	<i>i:'ri</i>	<i>i-'ri</i>	<i>e-'ri</i>
54. drink	<i>hu-</i>	<i>itæ-</i>	<i>kui-</i>
55. eat	<i>kaw-</i>	<i>u-</i>	<i>ja-</i>
56. bite	<i>kaw-</i>	<i>ka-, mama-</i>	<i>kahe-</i>
57. see	<i>apa-</i>	<i>tsere-</i>	<i>ã'wĩi-</i>
58. hear	<i>anapa-</i>	<i>munu-</i>	<i>jã'si-</i>
59. know	<i>arjo-</i>	<i>pateñu-</i>	<i>ũte-</i>
60. sleep	<i>awã-</i>	<i>mõ-'kãj-</i>	<i>wãwĩi-</i>
61. die	<i>hĩmẽ-</i>	<i>tũ-</i>	<i>isi-</i>
62. kill	<i>ta-</i>	<i>re-</i>	<i>otsi-</i>
63. swim	<i>sũ-</i>	<i>twĩ-</i>	<i>tsũ-</i>
64. fly	<i>tfaw-</i>	<i>pæræ-</i>	<i>hĩhĩrwa-</i>
65. walk	<i>pau- (run)</i>	<i>tetej-</i>	<i>tutu- (walk, tread)</i>
66. come	<i>ware-</i>	<i>tĩ-</i>	<i>onĩ-</i>
67. lie	<i>ty-</i>	<i>pe-ja</i> ⁶⁰	<i>ũi-</i>
68. sit	<i>dyry-</i>	<i>aj-ja-</i>	<i>hũdwa-, (ɓu)ũ-</i>
69. stand	<i>ɛwarjy-</i>	<i>tĩ</i> ⁶¹	<i>tsi-, ũ-</i>
70. give	<i>hiba-</i>	<i>pe-tso</i> ⁶²	<i>wadĩ-</i>
71. say	<i>kjã-, ka- (talk)</i>	<i>vara-</i>	<i>ta-</i>
72. sun	<i>ja de'rĩnɛ'ʔi</i> ⁶³	<i>kwi'kaj</i>	<i>ko'sa</i>
73. moon	<i>ja, 3a</i>	<i>mĩ'ta</i>	<i>haku'ri</i>
74. star	<i>jy'tɛ, 3y'tɛ</i>	<i>warĩwa'rĩ</i>	<i>tjitũ'jɛ</i> ⁶⁴
75. water	<i>ha'nɛ</i>	<i>ku'nĩ</i>	<i>hã</i>
76. rain	<i>ha'nɛ</i>	<i>væ-</i>	<i>awe</i> ⁶⁵
77. stone	<i>ha'zi</i>	<i>a'ki</i>	<i>ha'ki(-dwa)</i>
78. sand	<i>hĩ'nũ'ʔnũ</i>	<i>nũ'tfĩ</i>	<i>tsũrũrũ'nĩ</i>
79. earth	<i>dɔ, dy, ʔdø</i>	<i>tɛ'pĩ, tsa'na</i> ⁶⁶	<i>tsã'rã</i>

⁶⁰ The directional element *-ja-* refers to downward movements or positions.

⁶¹ The KAN root *ty-* has a wide semantic range which includes 'go, come, arrive, stand up, be standing'.

⁶² Certain verbs in Kanoê have discontinuous roots that are sometimes analyzable. The unidentified root element *pe-* must be combined with the classifier *-tso-* 'hand, finger' to create the meaning 'give'.

⁶³ Literally, 'moon of the day'.

⁶⁴ The KAN form is widespread throughout the Guaporé region. The AIK form is remarkable, since it is clearly related to the KAN specific term *ju'tæ* 'Pleiades', and one wonders whether there could be a connection with Guaykuru reconstructed **jutæ* 'star' (Grondona 2003). In KWA, *waruwa'ru* refers to the morning star.

⁶⁵ The KWA form can be used both as an independent noun and a verb. The AIK form is a noun and can be embedded in a verbal phrase involving the root element *zi-*, as in *ha'nɛ 3ikɛ'ða* 'the rain falls'. It is not clear whether KAN *væ-* can be used as an independent noun, since it is always part of the verb *væ-tsi-* 'rain have'.

⁶⁶ The alternative KAN form *tsa'na* 'earth, field' looks highly similar to the KWA form. However, it was not confirmed by L. Bacelar's (p.c.) fieldwork. The first KAN form *tɛ'pĩ* 'earth, soil' is somewhat similar to the AIK form.

80. cloud	<i>wirjya'ʔi</i>	<i>turo-</i> (weather)	<i>hanāwā-'nū</i>
81. smoke	<i>tʃy'ni</i>	<i>wajro'e</i>	<i>hinū'nū</i> (smoke, fog)
82. fire	<i>hi'ne</i>	<i>i-'nī</i>	<i>hi</i> (fire, firewood)
83. ash	<i>ḍūpapa</i>	<i>i-nī-ti'nū</i>	<i>hinū'nā</i>
84. burn	<i>tari'ka-</i>	<i>pīj-, kī</i>	<i>ke-, tsitsi-</i>
85. path	<i>ha</i>	<i>kū</i>	<i>tʃa'hī, -jāhī</i>
86. mountain	<i>u'i⁶⁷</i>	<i>o'nū</i>	<i>tsuritsa-'tu</i>
87. red	<i>hadī-</i>	<i>pē-</i>	<i>ki-</i>
88. green	<i>høɾøɾø-</i>	<i>pira-</i>	<i>dara-</i> (unripe, green) ⁶⁸
89. yellow	<i>parari-</i>	<i>iene-</i>	<i>wəu-, ha'si-</i>
90. white	<i>arara-</i>	<i>pæ-</i>	<i>ha-</i>
91. black	<i>vi-, ḍōri-</i>	<i>woro-</i>	<i>ḍe-, hoho-</i> (black, dirty)
92. night	<i>ḍū'ne</i>	<i>i'tsaj</i>	<i>hade'ja</i>
93. hot	<i>hāne-</i>	<i>totoro-</i>	<i>kike-</i>
94. cold	<i>kjawij</i>	<i>tunī'nī</i>	<i>awi-</i>
95. full	<i>jerewa-</i>	<i>dejō-</i>	<i>ḍoi-</i>
96. new	<i>ḍame</i>	<i>uru-</i>	<i>arwa-</i>
97. good	<i>hø'ʔā-</i>	<i>more-</i>	<i>wai-</i> (good, nice)
98. round	<i>urerepeʔi, -ḍāw</i>	<i>-kuta, -tæ</i>	<i>rirwa-, -kuti, -te⁶⁹</i>
99. dry	<i>henekaneʔi</i> (season)	<i>tsotsara-</i>	<i>kara-</i>
100. name	<i>kjawij</i>	<i>pwæ'kwæ</i>	<i>mā-'ni-ʔa-nāi</i>

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⁶⁷ The form in Hanke (1956:72), *uriri'ta*, was not recognized by consultants.

⁶⁸ The distinction between blue and green is not clear. In KWA, *mē'rūi-* 'blue, green' covers both. In AIK, *hōma-* 'light blue, green, gray' also includes certain shades of gray. Note that KAN *pira-* includes blue.

⁶⁹ The classifier for 'head' is also used in reference to bigger round objects, such as a calabash in KAN (*-kuta*) and in KWA (*-kuti*). The AIK form apparently contains the element *-pe-*, which may be a classifier for round things, and the verbal root (*d*)*urere-* meaning 'roll', which is related to the KWA root *duriri-* 'roll'. The alternative AIK form is a classifier referring to round things such as seeds and nuts, *-ḍāw*, which is possibly also related to KAN *-tæ* and KWA *-te*.

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